

OCTOBER 16, 1937

Railway Age

Founded in 1856

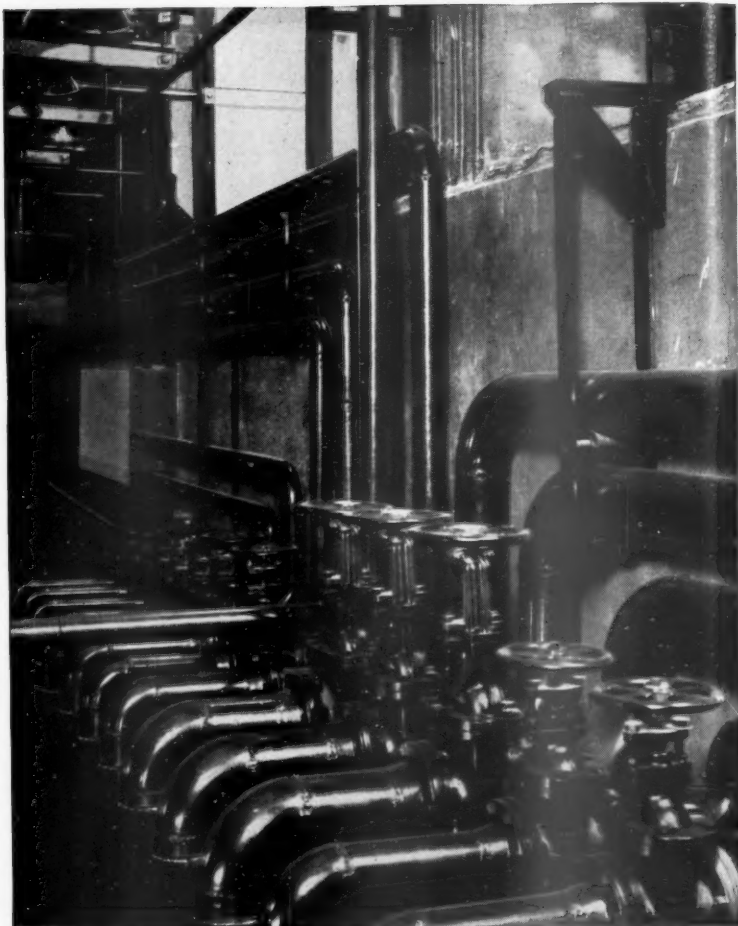
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Railway Age

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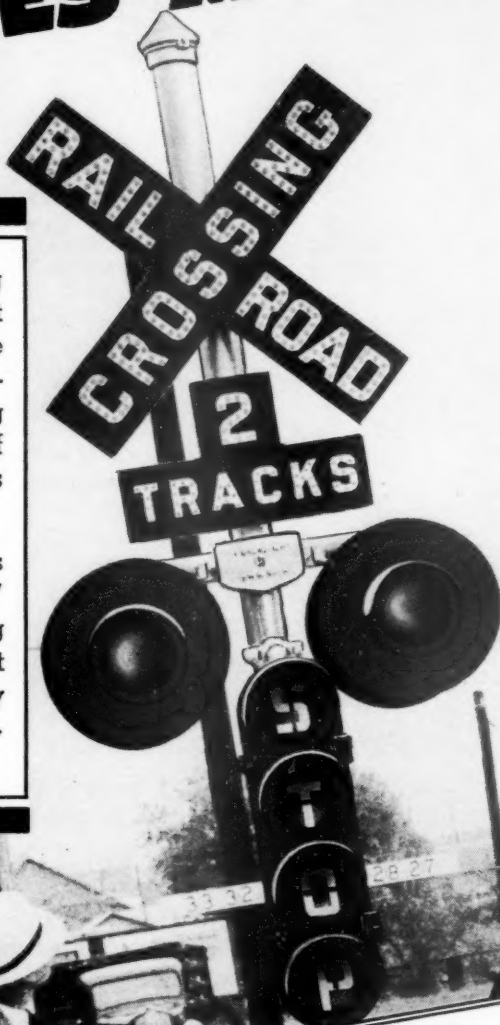
"The Last Word in Effort to Safeguard Motorists"

The M-K-T EMPLOYEES' MAGAZINE

MAY-1937

"If these do not stop motorists from running into trains or stop them so the trains won't run them down, then nothing but a grade separation will save them." Thus did federal and state highway and Katy operating officials place their okay *** on seven of the new electrically operated safety signals just installed on our lines in Texas."

And the M.K.T. Employees' Magazine voices the consensus of opinion about "Union" Modern Flashing Light Highway Crossing Signals and auxiliary apparatus. Consult our nearest office about your highway crossing problems. . . .



ANOTHER SAFETY EFFORT

When trains near the crossing, this new type of electrically-operated signal flashes a "stop" warning to approaching motorists. Seven signals, like that pictured here, have just been installed at various points on the Katy in a further effort to promote safety and to lessen the alarming number of highway crossing accidents.



1881

Union Switch & Signal Co.

1937

SWISSVALE, PA.

NEW YORK

MONTREAL

CHICAGO

ST. LOUIS

SAN FRANCISCO

The Week at a Glance

CARLOADINGS: In the October 2 week revenue carloadings totaled 847 thousand, up 3.4 per cent over last year.

CLAIMS FROM POOR CARS: Claim payments arising from defective equipment rose more than 30 per cent in 1936 over the preceding year, and in an article herein W. L. Ennis, manager refrigerator service of the Milwaukee, outlines some of the steps which car department men may take to reduce damage to shipments.

SCOTT CASE REOPENED: The I.C.C. has reopened for further argument the case in which it decided that Scott Brothers, trucking affiliate of the P. R. R., was a contract carrier under the Motor Carrier Act in its performance of c. and d. service. Local truckmen in New York and Chicago and a number of Western railroads petitioned for reconsideration. The Commission has likewise reopened the Acme Fast Freight case, which put this forwarder into the category of a freight broker, except where actual operation of motor vehicles was involved.

MARKET DECLINE: The decline in stock market prices is natural in view of the decline in actual business, an editorial herein contends. The former is the more spectacular, but stock price movements are compared with commodity carloadings figures and a definite correlation is shown to exist between them. The opinion is expressed, however, that probably no major depression is indicated by the stock market recession, since there has been no great expansion which, heretofore, has always preceded a depression of real magnitude.

DEFENDS I.C.C.: Congressman Pettengill of Indiana, speaking before the Associated Traffic Clubs in St. Louis this week, defended the independent commissions against the Administration's plan to "reorganize" them to bring them under political control. He classed this attempt with the attack on the integrity of the Supreme Court, and laid most current difficulties to business men who clamor for government favors. His address is reported in an article herein.

GOOD NEWS FROM NEWARK: The Atlantic Shippers' Board meeting in Newark, N. J., last week predicted an increase of 11.4 per cent in carloadings for the fourth quarter over those of last year in the board's territory. The board also heard the report of its committee on car construction and address by M. J. Gormley and Col. A. B. Barber of the U. S. Chamber of Commerce.

QUEER BELIEFS ABOUT R.R.S: A letter from a trainman, in which he defends the train limit bill and higher wages, is incorporated into the leading editorial in this issue. This letter shows, as the editorial points out, that the writer is misinformed on many cardinal points about the railroads—apparently, for one thing, believing that railroad stockholders are

"crying for 100 or 200 per cent dividends." The letter is published as typifying the queer notions about the railroads which are fostered by a section of the railway labor press—with consideration of the necessity for an educational program to eliminate opinions harmful to the industry which are based entirely on error.

SIMPLER REGULATION: Judge R. V. Fletcher this week told the annual meeting of the Illinois Chamber of Commerce that, with the possible exception of security regulation, additions to railroad regulation since 1906 have not served the public interest and should be repealed. Judge Fletcher contrasted the great elapse of time which Ex Parte 115 has taken with the 5 per cent rate advance which the British railways secured from the Rates Tribunal in 17 days.

N. Y. WEST SIDE: The third stage in the colossal plan involving the removal of New York Central tracks from the streets (and largely from public view as well) down the West Side of New York was completed this week when the express highway and the extensive park area (including trees) built over the Central's tracks along Riverside Drive were opened to the public.

Q EQUIPMENT PROGRAM: The Burlington has asked for bids on an issue of equipment trust certificates and expects to purchase or build in its own shops the following equipment: 100 ballast cars, 11 stainless-steel passenger cars, 5 locomotives, 250 automobile cars, 600 box cars, 100 hopper cars and 400 coal cars.

PENN PROGRAM AHEAD: The Pennsy's electrification program (Paoli to Harrisburg, Harrisburg to Perryville, the Morrisville cut-off and a couple of freight lines) is proceeding well ahead of schedule (completion not due until next summer), and will be ready several months ahead of time.

OPPOSES ONE BIG R.R.: J. P. Haynes, executive vice-president of the Chicago Association of Commerce, speaking at Evansville last week took sharp issue with the suggestion of Chairman Miller of the I.C.C. that the railroads be unified into one national system. The economies of such a merger, he contended, would be more than offset by the lack of progress which would follow the stifling of competition. The address is published in abstract elsewhere herein.

HUSKING BEE EXCURSION: The New Haven seems never to run out of original ideas for novelty excursions. Now it has announced a trip from New York to Kent, Conn., where excursionists will be served supper by the ladies of the local Grange, followed by a husking bee in which the excursionists will compete for prizes—with dancing to "hill billy" music to round out the evening.

MT. SHASTA MUD: The Southern Pacific, following wash-out troubles on its Cascade line in 1935 in which the deposit of debris was unusually heavy, has discovered the origin of the "Mt. Shasta mud," as an article herein reveals, and has rebuilt its bridges so as to offer no obstruction to flood waters heavily laden with detritus.

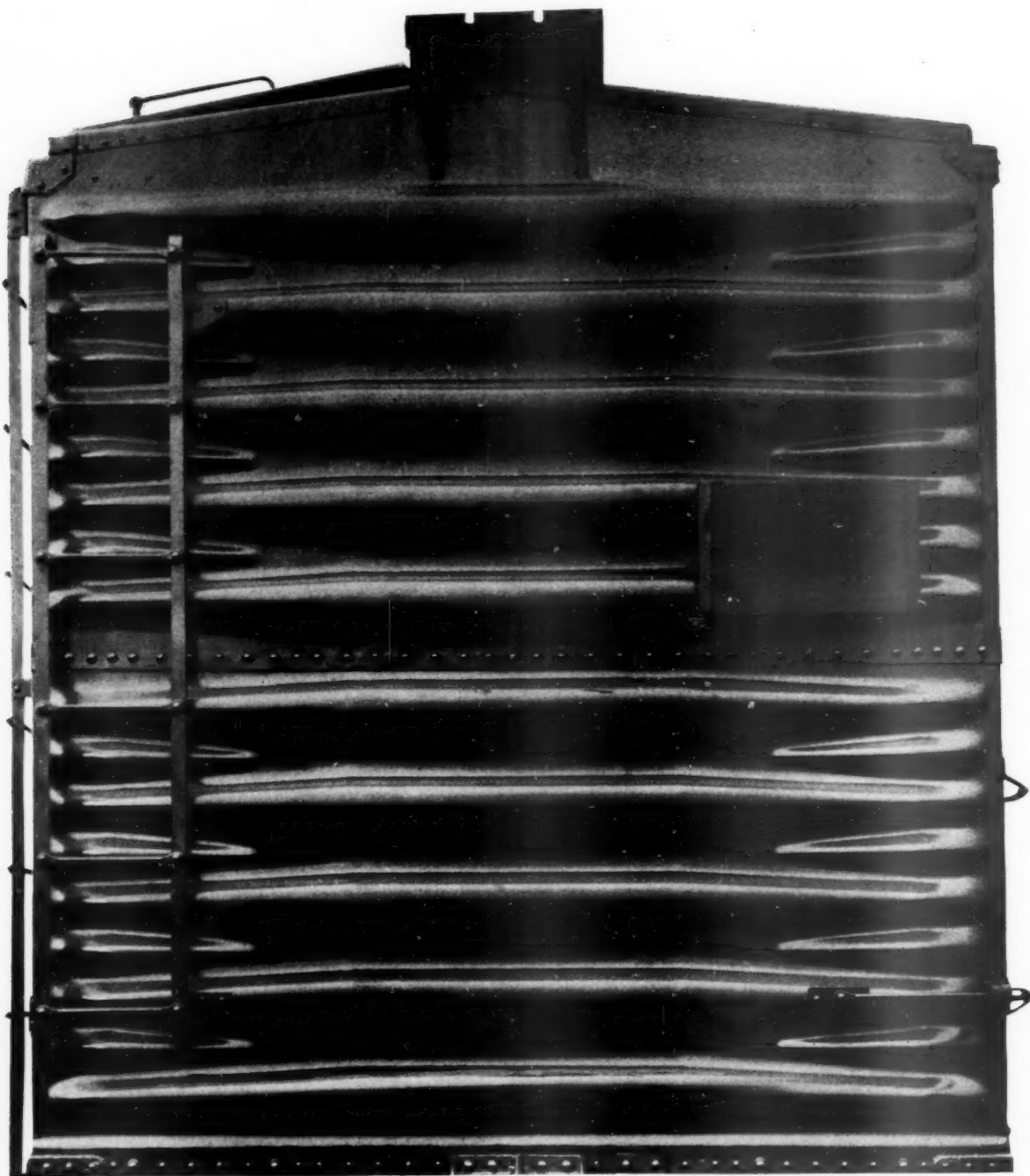
MODERN TEL. AND TEL.: The telegraph and telephone section of the A.A.R. met in Chicago last week, and the report of the proceedings published herein gives the high lights of the rapid development which is taking place in improving and reducing the cost of communication in railroad work.

N. W. MERGER: Protective committees of C. & N. W. and C. M. St. P. & P. security owners, in studying reorganization plans for the two roads, are examining also the possibilities of a merger of the two properties—it was revealed in correspondence filed with the I.C.C. on Wednesday.

CUSHIONS FOR "SHACK": The head brakeman is headed for greater comfort under an agreement just signed between the B. of R. T. and the A.A.R. under which the railroads agree to provide cushioned seats with arm and back rests in locomotive cabs or on tenders for the use of the head brakeman. Heat is to be provided in such shelters also, in territories where winter weather is cold.

30,000 LAID OFF: From the middle of August to the middle of September railroad employment declined by approximately 30,000—and the employees laid off can give credit mostly to the railway labor executives, with their insistence upon wage increases, for what has happened to them (because last year, when there were no wage increases, employment increased from August to September). As usual in retrenchment, the maintenance departments suffered the most and the decline in m. of w. employment was 6¼ per cent and in m. of e. 3¾ per cent.

NOT EARNING CHARGES: The recent advance in wages to trainmen, on top of those already granted, places the railroads as a whole on an annual basis of failing to earn their fixed charges by 100 million—so the editor of *Railway Age* informed the treasury officers meeting in New Orleans this week. Other industries have raised wages and are still making money, because they have been steadily raising the prices of their products, whereas railway rates have been beaten down until the average is now lower than at any time since 1918. The general price level has risen 36½ per cent since the bottom of the depression; meantime the average railway rate has declined 10½ per cent. An increase in freight rates is needed, and Mr. Dunn estimates that a rise of 14 per cent on the average is required to restore rates to the relationship with general prices which existed in 1930.



**THE RESILIENCY OF THE DREADNAUGHT END
HAS CONTRIBUTED MUCH IN REDUCING DAMAGE
CLAIMS TO BREAKABLE FREIGHT**

The Queer Things Employees Believe About the Railroads

In our issue a week ago we published an editorial entitled "Is There a Need for Employee Education?" By way of answer to our own question we publish below a letter we have received from a trainman, whom we shall call John Doe because we do not wish to embarrass him by disclosing his real name. Obviously honest and sincere, this man nevertheless holds opinions on crucial questions affecting the railroads which, as will be seen, are utterly cockeyed. To be sure, one employee holding such views does not prove anything. But we believe that John Doe is typical—not of employees as a whole, but of a very large number anyhow whose information about the railroad business is derived almost entirely from a certain section of the railway labor press. (there are honorable exceptions), and hence is bound to be fragmentary and largely erroneous. But the letter speaks more eloquently for itself than anything we can say of it—so here it is, just as it was written, except that we divided it up into paragraphs and inserted subheadings:

Do Employees "Take Chances" with Long Trains?

I have been reading your editorials that you publish in the *Railway Age* pertaining to the wages that Railroad men receive, also the legislation that the railroad Brotherhoods would like to have passed by Congress to better our working conditions. One of these bills in particular is the train limit Bill. Having many years of practical railroad experience in handling long trains. I must say that one must be on the ground actually performing the work, so that he may be thoroughly familiar with the work that is to be done, and how it is to be done when handling long freight trains under all kinds of conditions and circumstances including weather conditions.

This also applies to passenger trains if they have too many cars in a train. This work must be performed in a manner that requires a train crew to be capable, competent alert efficient and courteous. And not to be excited while performing their duties. The railroads and railroad officials don't expect you to make a mistake during the performance of their duties also. If we did make a mistake there would be some serious consequences. So you see we must be almost perfect as well as being in the best of health, as employees of any railroad.

The type of work we have cannot be read out of a book and then conveyed to the public or anyone else not familiar with railroad work, unless you have the experience of handling trains. This no one can learn in a few days, but many years. That is why we are trying to have a train limit bill passed so we can handle our trains successfully and safely, and not take chances. After all it is an education in itself and takes many years to acquire it. You question about handling seventy heavy loaded cars up steep grades. The provisions that we have, are to get more power or reduce the tonnage so that the train can be handled successfully up the grade. This is our work to perform and not for the public to handle trains.

In case you do not understand the operation of trains I could

enlighten you about this subject from a practical standpoint and not hearsay or books. The train limit bill is what we want for the safety of handling them, as well for the public safety. If you were engaged in any railroad work fifteen or twenty years ago. You will understand that the railroads handled many trains at that time. The trains were not very long, nor was the tonnage as great as it is today. The cars of today have a greater capacity as well as the trains being much longer. When we handled shorter trains a few years ago, it took more men to handle them, also many more engines. And, of course, the railroads did not go bankrupt, did they? Yet you seem to have the idea that they will go bankrupt now, especially with modern ideas or I might say with greatly economized ideas. No wonder we have unemployed and no business.

You also seem to be all excited about our wages, I can also discuss that with you, which you have greatly exaggerated. And as far as the public and our wages is concerned they have nothing to do with it. We are working for a Railroad Company and not for the public. Our work is to serve the public while performing our duties, and the railroads are in business to give the public whatever transportation services they have to offer for their benefit. So you see the wages we receive are paid by the railroad company and not by the public which you seem to be so greatly worried about. After all when food prices or other commodities go sky high, we do need more money to purchase the necessities of life. I am sure that if we went to the public and asked them for any increase they would naturally tell us that we were working for a railroad company and not for them. After all we don't go to the grocer or any hardware or clothing stores and question the employer or employees about how much pay they receive before we buy from them. That is not our business. In that case we are also a part of the public over which you seem to be so greatly interested.

Says We Exaggerate Wages

You also published a table showing our rates per hour which are wrong, at least my schedule does not show that we receive over a dollar per hour. As a trainman I don't receive such great wages as you say we do. To be fair our wages per hour are much less according to your figures. You also state that we are the highest paid men in the country. Well, sir, if I were one of these highest paid men I would be the happiest man living probably. Naturally if I received anywhere from one hundred thousand dollars and up per year I would not look for any increase. You are wrong by trying to make the public believe we are getting such enormous wages. You are wrong when you base your figures on account of the trains being speeded up. That is not up to us that we happen to work a little less once in a while. The railroads had to do something to better their services to compete with airplanes and trucks. By doing so, placed a greater responsibility on a train crews shoulders, as well as producing more work by handling longer trains. But the pay did not increase with the responsibility.

After all if I can understand rightly any person that holds a responsible position is paid for it, and he does not receive a manual laborer's wages. There have been times when we are classed as unskilled labor. I disagree with this opinion of anyone. When an employee of a railroad comes under the guidance of the Interstate Commerce Commission's laws, and must pass examinations understand many rulings and instruc-

tions, including tariffs in order to handle trains properly, I may also add many years of practical training and experience, be competent, alert, capable, honest efficient and courteous, also know every part of the railroad from stem to stern and many other items about railroad work not mentioned. I don't think we are very stupid after all, if you stop to realize the thousands of dollars worth of equipment and merchandise, also the thousands of passengers that are handled by train crews year in and year out, and must be done safely and efficiently, without injury or damage to employees or others. Then it should be worth while to pay employees much more than you think we get or deserve. After all we have what I might say an education of our own, which takes many years to acquire, not from books but as I stated before from practical experience. That in my estimation is the best teacher. We earn every nickel we get, and it is not a lazy mans money either.

Stockholders Cry for 100 or 200 Per Cent Dividends

You state that stockholders do not receive their just dividends. How much do you think these stockholders should receive? If they don't receive from one or two hundred per cent dividends, they are always crying, whether times are good or bad. But the poor employee that earns it for them must be satisfied with little or less. Statistics show that earnings in all industries have been rising steadily, also corporate investors only received four billion five hundred seventy-three million dollars in dividends for last year. That isn't much side money is it? We have something to live for, too, as well as the stockholders or some of these great financiers that have billions tied up and don't have to pay taxes for it or part with it in any way either. Then you criticise us for asking for a few cents increase. That certainly is terrible, isn't it? Our former Secretary of the United States Treasury passed out of life and left a few million or billion dollars tied up. I suppose you think that is alright for one person to have that much.

No wonder we had a depression. Every industry in the country economized and laid men and women off during the depression and are doing so today. Then wonder why we don't have any business in the country in spite of the Government trying to create business. The working man has neither job nor money, but the financier and stockholder pile it up. That is what I call depression on account of industries great drive economy. I would suggest that the employees be paid higher wages and you will have lots of business as well as dividends, and the employees satisfied. We could buy our needs with out skimping along on a few dollars pay, also save a few dollars for a rainy day instead of making drives on charity. You state that labor should do something effective by refraining from preaching about financiers and executives. How about the other side of the house crying constantly about the working class. No wonder we complain, we don't receive no one two or three hundred thousand dollars a year. We don't expect to receive that much, all we ask is to be given enough so that we can go long like real American people. Then we can buy build and save for a rainy day.

You also state that the members of our Brotherhoods are not in accord with our leaders move to call a strike. I dare say that we are, that is what we have leaders for and voice our opinion as to what we want or what they should do for us. Just as the stockholders expect their officers to demand large dividends for them. As far as a strike is concerned, that happens to be our weapon as well as the industry or powerful interests have money for their weapon.

In conclusion, being a trainman, conscientious and faithful to the Company I am employed by, I disagree with your ideas about railroad men, their wages and legislation which they have a right to look forward to, by trying to better their working conditions in the future, as well as in the past. You have exaggerated some of your criticisms, and I would suggest that if industry would be more considerate for there faithful employees, apply the golden rule and help there neighbor as thyself policy, we will all get along much better in this world.

Many leaders in private life seem to boast about our high standards of living in this country and then try to cut down

the high standards the next day and expect to have profits and income on a large scale. This cannot be accomplished unless industry pays the working class of people money enough to buy with and be able to save a few dollars in case of sickness or for other obstacles that may arise in any good American citizens homes. Then you will have business, profits, and dividends. That is what I would call progress in our good old U. S. A. Naturally if one million railroad men would economize the same as industry the small amount of one dollar a piece. That would be one million dollars worth of business lost and if other employees did likewise, would amount to many more dollars worth of business lost, wouldn't it? And the consequences would be a drop in high salaries for executives as well as stockholders.

The reason I come to these conclusions is the fact that I have kept an account of my expenses and income for over fifteen years, and it was not extravagant living by no means either, when you try to raise a family by educating them if possible, so that they would be honorable decent and respectable American citizens of our great country. Then we must have the means to take care of them properly, while they are growing to become honorable men and women. And not gangsters and gun men because they or their families haven't money enough and become a menace to society. That is also the cause of depression and economy. That is why the working men and women must fight to preserve there legal rights and have better conditions, better homes and a better country in which to live. I hope that this reply to your editorials will give you an idea of what the working class of public thinks about conditions as they are. I may also add that an increase in pay would be a great help at this time to stimulate business as well as satisfaction to us all in general, less strikes, better times and everybody happy.

A Few of Mr. Doe's Mistakes

If Mr. John Doe had been given a background of knowledge about the business which gives him his living so that he could distinguish truth from falsehood—that is, if he had some fundamental education in the economics of railroading—he would know—

1. That longer trains have not decreased safety on the railroads, but have increased it.

2. That in the days of which he speaks, when the railroads ran shorter trains and still did not go broke, the rates they charged the public were much higher than they are now, the total volume of traffic was much heavier, and wages on the average were lower. With the growth of competition, to hold even as much business as they have, the railroads have been forced to reduce rates and they have likewise been forced to pay higher wages. The fact that trains are longer is the only reason why even more roads are not today in receivership—or even junked and torn up.

3. That the public *does* have an interest in railroad wage rates, because as a result of increases in them, the railroads are forced to ask the public to pay more for transportation service.

4. That stockholders are not getting "one or two hundred per cent" dividends—in fact that large systems paying *any dividends whatsoever* can be counted on the fingers. The railroads as a whole in the years 1932-34 not only did not earn anything for their stockholders but failed by \$161,000,000 to earn what they owed their bondholders. In 1936 all the railroads of the country earned only \$164,000,000 net available for dividends—and the rate of return earned on the

total investment in railroad property was only 2.58 per cent.

5. That the wages we showed that trainmen and enginemen earn can be checked and verified by reference to I.C.C. statistics.

6. That, while the cost of living has recently increased, it is still well below the 1929 level so that railroad employees who have jobs are better off than before the depression, even without a wage increase.

7. That the fortune accumulated by a "former Secretary of the United States Treasury" proves nothing whatever about the railroad industry. If he had invested his money in railroad stocks, the chances are he would have died broke.

8. That we are just as much interested in maintaining a high standard of living for the American people as our correspondent is—but an improving standard of living means a constant inflow of new capital investment, which will not occur unless capital is given reasonable security and a promise of a fair rate of interest, which the railroads cannot offer it today. Furthermore, a higher standard of living necessitates a larger output of product per employee, and on the railroads this requires more tons per car and more cars per train—not less.

9. That, finally, when people save their money instead of spending it they do not cause unemployment, but instead they promote employment. Money saved is usually invested—whether by the saver directly or by the bank or insurance company to which he entrusts it—and money invested is spent for buildings, machines and other capital goods, upon the production of which millions of employees depend for their jobs.

Misinformed Employees Endanger the Industry

There are other evidences of misinformation in John Doe's letter which we shall not attempt to set straight, because it is not our purpose so much to reply to him as it is to focus attention on the problem he presents. Because it is not too much to say that the whole future, not only of the railroad industry, but the nation as a whole is in the hands of John Doe—and the millions like him throughout the country. In the case of the railroads this is particularly true, because at every turn the railroad industry meets the government—and all the government is is John Doe multiplied by several million, and the people who take their orders from him (and who boss him without his knowing it, largely through misleading and deceiving him).

Operating efficiency, the utmost in technical modernization, merchandising genius—all these combined will not avail to preserve the railroads in the absence of an informed public opinion, so intermingled are they with political forces. And how may it be expected that the general public will be informed if the railroad employees with whom they come in contact know only those things that aren't true about the business?

The problem is not one to be solved, in our opinion,

by a scattered broadside of propaganda—because a mind filled to satisfaction with half-truths will not absorb facts which belie such misinformation. Rather the only effective remedy is a thorough grounding in the workings of the railroad economy from the bottom up—the assimilation of the content of a thoroughgoing text book on railroad economics, which for most people could only be acquired under conditions akin to those of a school room. For John Doe, to have this knowledge is as essential to the well-being of the railroads as is his mastery of the book of rules.

"Company Men" Should Not Be the Aim

Such education would not convert an ardent unionist into a "company man," of course, and that should not be its aim. Leave the man free to talk and to vote for his own pocketbook, but make available to him the information he needs so he can act in this *true* interest, and not against it. Filled with misinformation as John Doe shows himself to be, he is bound to act against his own interest, because he does not know wherein it lies. Make John Doe and the thousands like him free from the bondage of error into which they have been misled and the result cannot be other than a vast gain in public appreciation of the problems of the railroad industry, an understanding in which lies their only hope of prosperity—or even of their continued existence as private enterprise.

How About Business?

Most of current speculation as to why stock market prices have declined so much seems superfluous in view of the fact that the decline in general business since the end of May and its unavoidable adverse effect on current and prospective profits are quite sufficient to account for the decline. The decline of stock market prices has been relatively greater and more spectacular; but the decline of business has been no less real.

Prices of stocks depend on current and prospective profits; and the decline of business has sharply reduced profits and made investors fearful about their future.

Railroad freight loadings are not only the best single measure of the total volume of business being done, but the statistics regarding them afford the first available evidence of a change in its trend. Railway loadings in the first five months of 1937 were 15.6 per cent larger than in the first five months of 1936. In the three months June-August, inclusive, they were only 6.3 per cent larger. In September they were only 4 per cent larger. In the week ended on October 2 they were only 3.4 per cent larger. All other industries produce and ship what the railways haul; and these figures demonstrate that about the end of May of this year the trend of general business changed from upward to downward.

The trend of stock market prices has corresponded

with the trend of freight loadings. In March freight loadings made relatively the largest gain over 1936 that they have made this year; and in that month stock market prices also were the highest that they have been this year. In October freight loadings are the lowest compared with 1936 that they have been this year; and prices of stocks also are the lowest. On March 10 the Dow-Jones average of industrial stocks was 194.40 and of railroad stocks was 63.06. On October 7th the industrial average was down to 146.59 and the rail average was down to 38.67.

There has been an approximately uniform downward trend since May in railroad loadings of all the various large classes of commodities, showing that there has been occurring a recession in most kinds of business. One of the marked and important recessions has been in residential construction. In the first four months of the year it gained almost 80 per cent over 1936. In May, June and July it gained only 19.5 per cent. In August and September it actually declined 23 per cent, thereby making the net gain for the first nine months of the year only 25 per cent. Building materials constitute a relatively large part of railway freight; and this recession in construction affords a good illustration of why railroad loadings have declined relatively as much as they have and of why stock market prices have declined so much absolutely. There has occurred meantime a corresponding change in railway buying from the manufacturing industry. It gained 74 per cent in the first four months of 1937 and only about 7 per cent in the next four months.

A question being much discussed is whether the recession of business during the last five months indicates the beginning of another major depression. There are strong reasons for believing that it does not. The most important of these is that conditions as respects the total volume of business, and in consequence as respects available capital and credit, are entirely different from what they ever were at the beginning of a major depression. All major depressions in this country have been preceded by unprecedented expansions of business resulting in demands for capital and credit that finally exceeded the supply of them and caused excessive rates of interest. There has been no such expansion of general business during the recent years of "recovery."

Even during the first five months of this year the total volume of construction, production and distribution was smaller than in any of the years between 1922 and 1931 and much smaller than in any of the years 1925 to 1929, inclusive. In consequence the surplus volume of capital and credit has remained very large and interest rates have remained low.

What, then, has caused the recent recession in business? It is probably due to the same causes that have prevented business from rising to the levels attained during the seven years prior to 1930. We have not had full recovery, and during the last five months we have been having a market recession, principally because business has feared to use or been unable to use the large amount of surplus capital available in the only way that would cause full recovery and maintain prosperity—viz., by investing it. The railways within recent months have been reducing their buying from the manufacturing industry because their net operating income and buying power have been declining. Why have other industries feared to enlarge their investments? Because in their cases, as in the case of the railways, rapidly advancing wages and prices and other influences have been curtailing, or causing fear of curtailment, of profits. There has been occurring a decline of the only kind of "confidence" that stimulates business—viz., confidence in future profits and especially in profits likely to be derived from new investment—because government, labor union and business policies have been increasing costs of production, transportation and distribution faster in proportion than the volume of construction, production and commerce has been increasing.

Neither government, labor leaders nor business managers, nor all of them, have the last word in business. The customer and investor have the last word. They decide what prices will actually be paid and how much investment will be made. Resumption of the increase in general business will occur when prices have been made satisfactory to buyers and prospective profits have been made satisfactory to investors. We have not entered another major depression, but merely a period during which readjustments must be made to enable business to resume the upward trend that prevailed from August, 1935, to May, 1937.

Some Effects of the Train Limit Bill

As prevalent as steel bodies are for automobiles, they aren't protection enough in a battle with the "iron horse." For the first half of this year, 858 persons met death at highway-railroad grade crossings, an increase of 100 over the same 1936 period, and 128 more than during the first six months of 1935. While highway conveyances were vainly seeking to gain a decision over locomotives, the nation's railways went quietly ahead with establishing a record of no passenger deaths in train accidents during the first six months of the current year. Passenger traffic on the rails is showing an upward trend, and passenger-miles were up 17.8 per cent over last year, which

makes the carriers' safety record all the more impressive.

The figures, incidentally, furnish the basis for a strong point in fighting the bill intended to limit freight trains to seventy cars, whether they be full or empty. Particularly is this so in the grade crossing death total. Shortened freight trains mean more trains to carry an equal volume of business, whereas some companies have recently discarded locomotives capable of handling seventy-car loads. The Association of American Railroads estimates that passage of the bill would increase grade-crossing fatalities by 150 annually, and would injure 450 persons more than at present.

—From the New York Herald-Tribune

Looking Upstream From the Track Along Whitney Creek Showing the Character and Extent of the Debris That Was Deposited by the Flood Waters. Mt. Shasta Can Be Seen in the Center Background with Mt. Shastina at the Right



Mt. Shasta "Mud" Flows Require Line Change on S. P.

Heavy discharge of glacial material following cloudburst fills valley behind 35-ft. fill and overflows track

By Gerald Tileston

LAST year the Southern Pacific carried out a short line change on the north slope of Mount Shasta for the purpose of incorporating improvements designed to protect its track against the repetition of an unusual disaster that occurred in 1935. Not only is this project of interest because of the corrective measures adopted but also because of the nature of the trouble encountered, which had its origin in certain geological and topographical conditions which are peculiar to this region.

The line involved is the Cascade line, the more easterly of two single-track north-and-south routes which together form the Shasta Route of the Southern Pacific, serving points in Northern California, Oregon and Washington. This route diverges at Black Butte, Cal., one leg, known as the Siskiyou line, swinging to the northwest and thence north in the valley of the Shasta river, while the Cascade line extends generally in a northeasterly direction, skirting the lower slopes of Mt. Shasta, before turning north.

Nature of the Difficulties

At a point on the latter line near Graham, Cal., Whitney creek, which has its headwaters on the upper slopes of

Mt. Shasta, crossed under the track through a double 8-ft. by 8-ft. concrete box culvert situated at the base of a 35-ft. embankment. One day in August, 1935, following a local cloudburst on Mt. Shasta and accompanied by a roaring noise, a flood, carrying large quantities of mud, sand and boulders, poured down Whitney creek, quickly clogging the culvert, and in less than five minutes filling the entire valley above the embankment with debris. It was estimated that the material thus deposited totaled between 350,000 and 400,000 cu. yd. Twenty minutes later a similar but less extensive flow occurred in Graham creek which is somewhat to the west of Whitney creek, and the smaller valley at that point was also completely filled.

These initial flows did little damage to the track or embankment except to block the drainage openings, but about 5:30 p.m. on the same day, while a section gang was engaged in removing material that had been deposited on the track in several places by the initial flow, a second flow was heard approaching.

The men scarcely escaped to safety before about 1,000 ft. of the track was submerged in 5 to 8 ft. of water which, like the first flow, carried large quantities of debris. This flow scoured the downstream side of the embankment in a number of places and finally washed



View of the New Bridge Looking West
Along the Downstream Side

three openings through the fill. Incidentally, some of the material was carried about four miles farther downstream where it blocked a state highway and partially buried several automobiles. When the flood waters had receded it was found that debris had been deposited on the track for a distance of about 1,000 ft. to a depth of 5 ft. or more and that from this elevation the surface of the material on the upstream side of the track rose on a grade of about 5 per cent.

Following this occurrence traffic was diverted to the other line and repair gangs and material were sent to the scene of the overflow. By the following morning the debris that had been deposited on the uphill side of the track appeared to be sufficiently stable to support a track, and a "shoofly" was constructed over it to carry traffic, pending a study of the situation on which to base the design of permanent repairs. Construction of the temporary track involved the building of three pile trestles at points where the track was intersected by channels that had been cut in the surface of the debris.

Investigation Started

The Cascade line of the Southern Pacific was completed in 1926 and never before had traffic over it been interrupted because of flows off Mt. Shasta. However, on the south side of the mountain "mud" flows in Mud Creek, which has its origin on the Konwakiton glacier, are of relatively frequent occurrence and have occasioned considerable damage to the McCloud River Railroad. The unusual character of these flows and the suddenness with which they were prone to occur naturally raised the question of their origin and, following the flow in



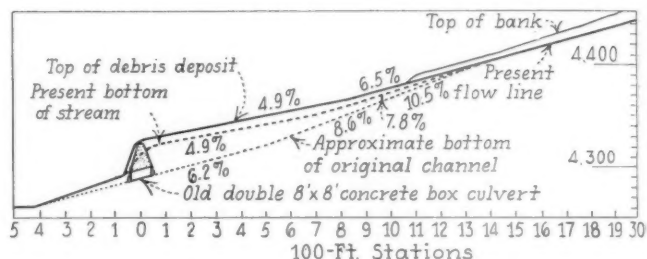
Looking East Along the Upstream Side of the New Bridge

Whitney creek, an investigation of the matter was undertaken.

Mt. Shasta is a huge volcanic cone rising from a plateau 4,000 ft. above sea level to a height of 14,181 ft. It is built up of a succession of lava flows and beds of tuff erupted over a great period of time, which rest on a mass of paleozoic rocks. Nearly all the lava seen from the railroad is andesite of one variety or another.

The summit is perpetually covered with snow and numerous glaciers are to be found on its upper slopes, while the lower slopes are clothed with brush and remnants of a once extensive forest, now all but destroyed as a result of fires and logging operations. The timber line is approximately at the 9,000-ft. level, although between this elevation and the 10,000-ft. contour are to be found clumps of bushy trailing pines. Above the 10,000-ft. level appear only snow, ice cliffs and bare detrital slopes.

Whitney creek, which originates at a glacier bearing the same name on Mt. Shasta, is also fed by two other creeks, namely, Bolam creek, which flows from Bolam glacier, and Graham creek, which has its headwaters on the upper slopes of Mt. Shastina. Under normal conditions these streams converge about 1½ miles above the track at Graham. During the period from June to September the melting of the glaciers causes a continuous flow in Whitney creek, which brings down large quantities of sand from the sides of the mountain. In fact, the deposition of sand by this creek over a period of



This Profile of the Bed of Whitney Creek Shows How the
Debris Was Backed Up by the Embankment

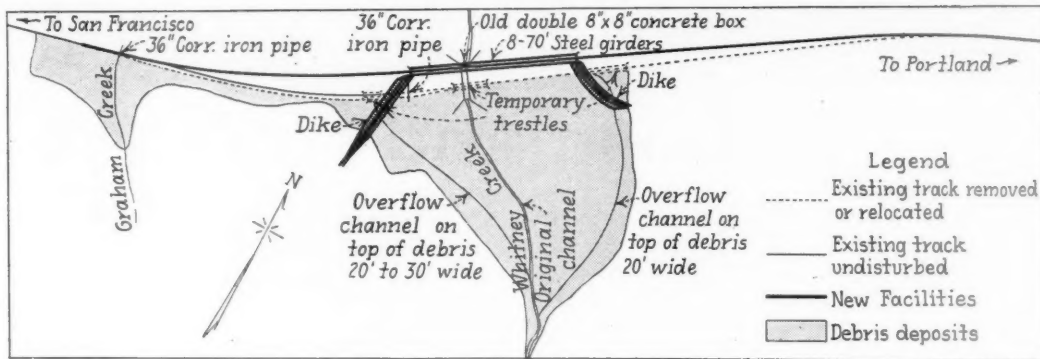
years has been sufficient to support a successful sand-producing plant at Graham.

Profile of Stream Bed

The distance from the track to the top of Mt. Shasta, measured along the Whitney drainage course, is 8.3 miles, and from the track to the toe of the glacier is 6.4 miles. From the summit of the mountain down to a point known as Whitney falls, a distance of 4.2 miles, the slopes are rugged and steep, the drop in elevation in this distance being 7,580 ft. and the average grade being 34.2 per cent. Below Whitney falls the slope becomes less precipitous but at no place in the 4.1 miles to the track is there any flat country. In this distance, with a drop in elevation of 2,280 ft., the average grade is 10.5 per cent. Originally the creek flowed across the railroad's right-of-way on a grade of something less than 7 per cent, but following the mud flow of 1935, and the filling of the stream bed behind the embankment the grade was reduced to 4.9 per cent.

Origin of Deposited Material

Neither lakes nor wide valleys exist on Whitney creek or its tributaries and no evidence was found to indicate that large slides had formed temporary dams across canyons; thus the theory that the sudden "mud" flows



Plan of the Situation at Graham

were caused by the washing out of such dams or of lake barriers could be discarded.

It was discovered, however, that sliding rock and pumice are constantly finding their way into the stream courses, this movement being enhanced by the increased rate of erosion of the slopes which has accompanied the destruction of the forests that formerly covered them. Moreover, it was found that masses of loose rock from the top slopes of Mt. Shasta are constantly feeding into the glaciers, the individual pieces being reduced in size by the movement of the ice and snow and later discharged at the mouth of the glacier to form moraines. As time goes by the moraines become larger and the slope becomes steeper; the rate of the slope below Whitney glacier is now 46 per cent. The eroding power of water flowing over these slopes is therefore great, and, as the slopes rise, increasingly large quantities of material are washed into the streams.

From these facts it was concluded that the large amount of solid material which was carried down Whitney creek by the flood waters was comprised of detrital material from the glacial moraines, the ancient pumice deposits and the boulder, sand and gravel deposits in the stream beds. The sudden flow of water occurred following a cloudburst over the top of the mountain, which was of short duration and was confined to an area of about two and one-half square miles.

Repairs and Corrective Measures

When undertaking permanent repairs to the affected line last year the railroad, recognizing the need for providing a larger waterway opening at this location both to accommodate such flows as accompanied the flood and to provide an opening of sufficient size to allow the free

passage of large quantities of debris, decided to carry its line across Whitney creek on a deck plate-girder structure consisting of eight 70-ft. spans on concrete piers and abutments. So that this structure would be beyond the influence of the debris that was deposited during the mud flow of 1935 it was located about 60 ft. downstream from the old alignment, thereby requiring a line change involving the construction of about 3,170 ft. of track. The project also involved the removal or relocation of about 2,200 ft. of the existing main line and of a 1,248-ft. passing track that was located within the confines of the line change. About 900 ft. of the existing main track at the west end of the line change was left in place to serve as a spur track.

For the purpose of controlling and guiding further flows of debris to the bridge opening, dikes or levees were constructed at each end of the bridge on the upstream side. Constructed of material deposited by the creek waters, these levees extend diagonally in opposite directions and are of such length as to reach beyond the outer edges of the area that was inundated by the 1935 flow. Another protective device that was installed is a reinforced concrete apron that was constructed in the main channel of the stream where it passes under the bridge, the object being to prevent the undermining of the two piers that flank the main channel during flood stages in the stream.

Construction of the bridge and other aspects of the line change was delayed briefly when, during the progress of the work, another heavy mud and water flow occurred causing considerable damage. The flow in this instance was about 11 ft. deep and caused a channel 27 ft. deep to be scoured out under the track. Following this flow, which required traffic again to be detoured over other lines, the line change was pushed to completion without mishap.

INCREASES IN WAGES and other costs, which have recently forced railway managements to retrench, are no doubt largely responsible for throwing approximately 30,000 railwaymen out of work during the one-month period from mid-August to mid-September. The Interstate Commerce Commission's preliminary figures on the status of employment at the latter time reveal a drop of 2.54 per cent in the total number of workers as compared with the middle of August.

The mid-September total was 1,133,227; the comparable figure for August, 1,162,797. All classes of employees, save only the train and engine service group where the rise was 0.45 per cent, lost out during the month. Maintenance forces were hardest hit, the number employed in maintenance of way falling 6.3 per cent and the equipment group 3.78 per cent; next came clerical forces with an 0.91 per cent loss.

Total employment in September was 2.87 per cent above September, 1936, and last month's index number, based on the 1923-1925 average as 100, stood at 63.4, the lowest since April, when it was 63.3.



This View Shows the Concrete Apron That Was Installed in the Bed of the Stream to Protect the Bridge Piers Against Scour

Car Men's Responsibility for Freight Loss and Damage*

Suggested car-department methods which will reduce the causes for shipper dissatisfaction

By W. L. Ennis

Manager Refrigerator Service and Freight Claim Prevention, C. M. St. P. and P.

IN 1936 the carriers spent \$20,920,000 in loss and damage claims, as compared with \$17,946,000 in 1935, an increase of very nearly three million dollars, or 18.6 per cent. Now here is where car men enter the picture. Of that amount the carriers in 1936 spent \$1,208,000 in claims due to defective or unfit equipment. In 1935 they spent \$925,000. You will note there was an increase of \$282,000 or 30.6 per cent, very nearly twice the percentage increase as in the general loss and damage bill. Commodity prices have shown an upward trend for the past two of three years, making it doubly necessary for us to take whatever action is necessary to stop that increase, and if possible to reduce it.

Aside from the monetary issue, we have a much greater item to consider, and one that every employee on the railroad is vitally interested in, because it means his bread and butter. That is the dissatisfaction that is created where we damage or delay freight. If we continue to damage and delay freight, our shippers are going to be dissatisfied with our service and are going to find some other means to transport their freight where it will receive better attention. Naturally the railroads losing business must decrease their expenses. Often the quickest way to get money is to reduce pay rolls, and that means taking off employees. Therefore, every employee should be interested in reducing the loss and damage.

Classify Cars for Commodity Loading in Daylight

The car man is responsible for the classifying of cars for commodity loading. He plays a very important part in the loss prevention program as, the transportation department depends entirely on the carding which he has placed on the car. Where the inspector does not give sufficient time and thought in the inspection before carding a car, failing to take into consideration the necessity for making a positive inspection of the interior of the car with the view to developing whether it contains any protruding nails, bolts, etc., whether there are rough floor boards, side sheathing and other defects in the floor, roof or sides, liable to cause damage to freight in the way of contamination, he immediately creates a situation that will eventually lead to claim payment.

Classifying cars for commodity loading should be confined to the daylight period. Otherwise trouble is bound to result, not only in the way of damage to freight but, worse yet, in the way of a dissatisfied patron, not to speak of the additional expense incidental to handling and switching an unfit car in and out of an industry, tram track or warehouse.

The Western carriers for the past few months have been handling a large grain crop, and have had considerable difficulty in selecting cars for the loading of bulk grain because of many defects in the cars which, if used, would result in leaks. These defects consist of leaky floors, sidings, corners, defective door posts, oil and other stains.

The one defect that was outstanding to my mind was that many cars of Eastern and Southeastern ownership which had recently received heavy repairs were not fit for grain loading because the boards used in the decking of the cars were not tongued and grooved. The lumber, having shrunk, left openings ranging in size from $\frac{1}{8}$ in. to a full inch. Naturally these cars could not be used for grain loading. Some of them had been carded as fit for grain at terminals, moved empty for several hundred miles to the grain territory, and then found unfit for loading without the trouble of considerable reworking and the use of car liners.

During the past few years many shippers have adopted the so-called unit-tie method of loading freight. This plan involves the strapping of the lading in units in the car, the idea being to create a floating load, giving the units a chance to shift if there be any undue rough handling. One of the first requisites in employing this method of loading is a car with a good level floor. Therefore, in classifying cars for loading with commodities, such as enamel ranges and stoves, refrigerators, machinery, barrelled commodities, etc., it is important that a car with a good floor be furnished and care should be taken not to use a car where there is a hump in the floor, which ordinarily means an uneven load and consequent damages.

In the selection of cars intended for the loading of paper, sugar, flour and other mill products, lumber and freight in cartons, it is important that a car be selected that is entirely weatherproof, cinderproof and dirtproof. Numerous claims, many for very large amounts, have been paid in the case of lumber, flour, sash doors, etc., where cinders and smoke have entered the car in transit, creating damage to the lading. In most of these cases the entrance of the cinders, rain or snow, occurred through the roof or around the side door. Here again we are faced with a situation which can only mean inspection from the interior of the car with all doors closed.

The adoption of special equipment for the transportation of automobiles has involved many problems for the car-department people, and I can not overemphasize the necessity for a 100 per cent inspection of cars set for loading at the automobile plants. Such inspection should cover fully the various parts of the loading device. Where there is any doubt whatsoever as to whether the device

* Abstract of a paper presented before the convention of the Car Department Officers' Association, held at Chicago, September 28 and 29, 1937.

is in condition to transport safely another shipment of automobiles, the car should be bad ordered and given necessary repairs before being used again.

The general thought throughout the country seems to be that any old car is a fit merchandise car, and the practice pretty generally is to card rough box cars for merchandise loading. The value of a car of flour, mill products, etc., is ordinarily \$300 to \$2,000. We use the best car that we have on the railroad for that commodity. We have every conceivable thing produced in this country in our merchandise cars, and oftentimes the value of a carload of merchandise runs up to \$30,000. Nevertheless we use a rough box smeared with oil and grease, coal etc., with a poor leaky roof and doors, loose decking and side sheathing, for carrying a load of that value.

Delays to Perishables Are Expensive

One item of expense and dissatisfaction to patrons is delay. The A.A.R. Freight Claim Division report of 1936 shows that Class I carriers expended \$796,000 in that year as compared with \$618,000 in 1935, an increase of \$178,000, or 28.8 per cent. This item shows a much greater percentage of increase than the general loss and damage bill. The largest portion of the delay bill is chargeable to fruits and vegetables, meat, dairy products including butter, eggs, cheese, etc., and livestock.

In analyzing many of the claims that are paid as a result of delay to these particular commodities, we find that mechanical defects which caused setting the cars out either in terminals or between terminals for hot boxes, brake rigging, etc., were of such a nature that they could and should have been detected on the empty movement to the loading station and prior to the time that the car was loaded. In other words, attention is not given to the empty equipment on its return to the loading territory. The inspector apparently assumes that the car is only an empty, and someone beyond him will see to it that it is thoroughly inspected before it is placed for loading.

Not only do we delay the particular car by setting it out, but often we delay the train carrying that car to the extent that it misses its connection. That train may be carrying 50 to 70 perishable or livestock loads that may arrive at destination late. Where we have a decline in market, losses are sustained, and we are called upon to assume them.

We may feel that many of the items that are resulting in large expenditures of money through the freight claim channel must happen, that they are incidental to our transportation system and that there is no corrective action necessary. In the Chicago terminals some few years ago we were setting out hundreds of cars containing perishable, and paying out thousands of dollars in loss and damage claims because of delay, until one of your members, C. J. Nelson, who is now superintendent of the Chicago Car Interchange Bureau, arrived on the scene. Our trouble was immediately minimized, and today we are moving perishable through the Chicago terminals close to 100 per cent on time so far as mechanical defects are concerned. It can be done.

Help the Shipper With the Loading Rules

Another item of expense that can be improved with your assistance is the \$390,000 that the Class I carriers paid out during the year 1936 in the settlement of claims brought about because of damage to shipments of machinery. In an effort to eliminate such claims on the C. M. St. P. & P. We have inaugurated a system

whereby, when a shipper orders a car for machinery loading, the agent at the original station immediately notifies the local car-department representative so that the latter can arrange for an inspection of the machinery at the time the shipper starts to load. The car man, being present when the loading starts, will be in position to give the shipper advice as to just what is necessary in the way of blocking, bracing, etc., and thereby not only render real service, but at the same time eliminate the possibility of a claim. At the same time, he furnishes our office with the car number, destination, routing, etc., and we, in turn, pass the information to the various operating divisions, and to connecting lines in the case of interline shipments, asking that the car be given careful handling all the way through to destination. The results generally have been highly satisfactory.

I am sure that you have had the experience of rejecting a load of machinery from the shipper because it was not properly blocked and braced, which resulted in delaying the shipment and dissatisfied the shipper.

In carrying out our loss-prevention program, the claim-prevention officers have been faced for many years with a lack of information as to the exact cause for damage, particularly in the case of carload commodities where the car arrives at its destination with the lading shifted, bracing or blocking displaced, and evidence pointing to hard usage in transit. We are not attempting to sidestep the responsibility of the carriers by indicating that unusual handling does not occur. However, we know that in many instances where unusual handling is assigned as the cause for damage such is not the case. On the contrary, the shipper or the shipper's forces rather have failed to load and protect the lading in a way that would eliminate damage even though the car did receive ordinary handling.

For instance, we will find that a shipper will go to the expense of purchasing lumber of a suitable quality, free from knots, brash, dry rot, etc., and then will undo his good work by failing to use nails or spikes of proper dimensions. In other instances sufficient thought is not given to the application of the protection, with the result that it does not serve the purpose for which it was intended. I have in mind shipments of top-heavy machinery and other articles where there is an opportunity for them to tip over in transit, even though the car is handled with the utmost care, provided a sufficient amount of protection is not applied to offset this particular tendency.

Running Inspection of Open-Top Loads

One place where we have some real work to do is in connection with our inspection of shipments loaded on open-top cars. The car man is usually particularly attentive to the running gear in all cars in the train which he is inspecting. When he comes across an open-top load, he should take sufficient time also to examine thoroughly the manner in which the car has been loaded, and satisfy himself that adequate and sufficient protection in the way of blocking, bracing, etc., has been applied to keep the shipment from shifting or tipping over. I refer to such shipments as contractor's equipment, clam shells, roadway machinery, tractors, auto trucks (moving on flat cars or in gondolas), automobile frames, welded steel pipe, generators, bridge and structural steel.

Vibration plays a part in displacing loads of this nature from their original position, as does unusual handling. In my opinion they should receive more than the ordinary inspection. We have asked our train and engine crews, as well as our agents, to watch loads of this nature, so that we may avoid serious accidents and the

payment of large sums of money on such commodities in the way of loss and damage claims.

Most car-department officers have jurisdiction over the employees assigned to wrecking outfits, and it is your duty from time to time to go out on the railroad and supervise the picking up of derailments of accidents. We have always felt that the use of a lot of good common sense at times like these would save considerable money for the railroad concerned.

The most important consideration in railroading is a main track which will permit operation of trains. A lot of damage to the cars involved in derailment as well as to the contents can be eliminated by doing the job just a little more carefully. Where it is impossible to rerail or retruck a car without undue delay, the next best thing is to set it upright alongside the track where the contents can be salvaged later after the main line has been restored to operation, rather than to turn the car over, causing not only damage to the equipment but, worse yet, to the contents.

It has often been our experience that considerable money could be saved by removing the contents of a derailed car and hauling them by truck to the nearest side track where they could be loaded into other equipment, instead of trying to pick up the car and contents. Generally speaking, when such action is taken the lading shifts, shearing off a part or all of the superstructure, thereby causing heavy damage to the car and to the lading.

Prevent the Perpetuation of Hidden Defects

An item that I am sure can be worked out by your organization and one that is important is the proper disposition of freight equipment that has been responsible for damage caused by some hidden defect that could not be detected by visual inspection. We have had any number of instances where claims ranging from \$300 to \$1,000 have been paid because freight was loaded in a car that had a defective roof, doors, etc. The claim-prevention organization in many instances did not hear about the case until the claim was paid and after the car had been unloaded and placed back in freight service.

Where a car is defective and has caused damage, some definite action should be taken to repair it, so that it will not be placed back in service and cause the same damage over and over again. The mere changing of the classification card reducing a car of this nature from a high classification to a lower category does not correct the condition, because the next car inspector will recard it for a higher classification, not knowing that a defect exists.

On the Milwaukee we have asked our agents to mark the defects with white chalk inside of the car, so that they will be seen readily by the car inspector. He is also requested to tell the dispatcher that this particular car has caused damage due to some mechanical defect and to move it to the first point where there is a car man, so that he will be able to make the proper inspection and take the necessary action to correct the condition.

New equipment and cars shipped for heavy repairs and rebuilding should be better cars than many we have in service at the present time if we give proper consideration to the various items that are causing loss and damage claims. I have in mind, for instance, many cars equipped with steel threshold plates which have not been countersunk flush with the floor or cut off so that they will not protrude beyond the doorpost. Where steel threshold plates are employed, holes not less than 1½ in. in diameter should be placed 6 in. or 8 in. apart the entire length of the plate, in order to allow shippers to ap-

ply doorway protection. This is also true of steel doorpost plates. In many instances, nailing strips are being applied to the doorpost that protrude as much as 1½ in. beyond the side walls of the car, creating hazards which are bound to result in damage to lading contained in sacks or cartons. The bolts used in securing the decking and siding in many instances protrude beyond the lumber to the extent that they also create additional hazards.

Condensation Still a Problem

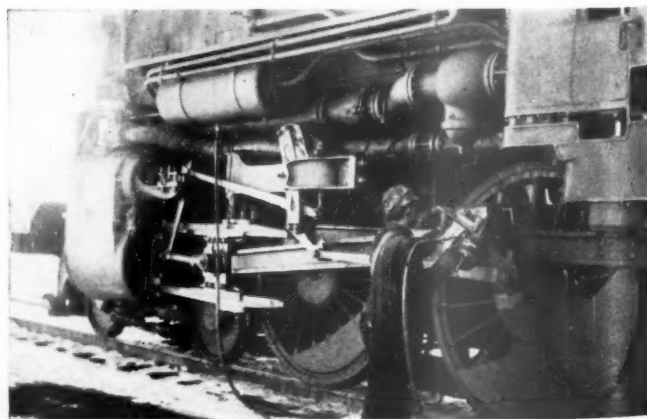
In an effort to counteract condensation in steel-roof equipment, which is a very troublesome item from a loss-and-damage standpoint, openings at the eaves and ends of the car have been provided, intended for ventilation. This has not corrected the trouble but, on the contrary, has created additional opportunities for damage because dust, cinders and the elements enter those openings. I hope that something can be worked out to correct this condition.

The type of door used on many of our box cars is loose and herein lies one of the greatest opportunities for damage to freight due to water, dirt, etc. A door that will completely seal up the doorway opening will go a long way toward reducing our loss and damage bill as well as satisfying our patrons.

The speed to which our freight trains have been stepped up is such that we are handling freight today on schedules that our passenger trains used to travel on. This speed and our present equipment result in vibration that is causing damage to many commodities. I believe that all new equipment, regardless of the character of the car involved, should have stabilized trucks to reduce vibration. It would be economical from a car-maintenance standpoint, as well as from a loss-and-damage prevention standpoint.

Remember, in the railroad business we have only one thing to sell, and that is service. When a car is furnished for loading of any commodity and it is not in proper condition safely to transport that shipment to its destination, we have not only created damage that is expensive but, worse yet, the dissatisfaction which always follows when freight arrives at its destination in a damaged condition. Surely we must appreciate that our shippers are vitally interested in delivering their products to their customers in first-class condition. Usually they spend large sums of money in preparing their products for shipment in an effort to accomplish this result, and when they arrive in a damaged condition they can not help but feel that the railroads are responsible.

* * *



Southern Pacific's No. 4373 at Carlin, Nev.

Do Shippers Want a Unified Rail System?*

Consolidation of railroads into one unit would lead to a single system for all forms of transportation

By J. P. Haynes

Executive Vice-President, Chicago Association of Commerce

IF any doubt exists in the minds of anyone that privately owned and operated competitive systems are the most desirable and beneficial to the country it is only necessary to review the progress that has been made during the last 100 years. It is hard to understand why anyone should now desire to change this system for a single unified system of transportation, or for one of government ownership which must inevitably result in government operation. The change would not stop with one unified system of rail transportation but would ultimately include all forms of transportation owned by the government and operated by politicians with the burden of the resulting inefficiency resting upon the taxpayer.

Unfortunately, there appears to be a feeling among a certain element of our population that the transportation industry is something entirely separate and distinct from the general industry of the country and that it should be treated accordingly. In a recent address before the forty-ninth annual meeting of the National Association of Railroad and Utilities Commissioners at Salt Lake City, Carroll Miller, chairman of the Interstate Commerce Commission, advanced the thought that a solution of the transportation problem lies in the adoption of one national railroad system. One of the reasons advanced in favor of this suggestion was that it would tend to simplify the rate structure of the nation, permitting one simple unified rate system as a substitute for the varying rate levels in different sections of the country.

In considering Mr. Miller's suggestion, it should be borne in mind that the varying levels of railroad rates, for the most part, have been prescribed by the Interstate Commerce Commission itself based upon transportation conditions and the resulting cost of producing transportation in the several sections of the United States. Obviously, to carry out this idea, under a unified transportation system, would mean that transportation should be furnished in one section of the country at less than cost and be compensated for in other sections of the country where the transportation conditions are more favorable by exacting charges in excess of cost plus a reasonable profit.

Will Not Equalize Costs

If costs are to be equalized with respect to transportation, obviously, they must also be equalized with respect to all other factors entering into the total cost of production and distribution if all competing communities are to be placed upon the same level. Stated differently, if the

manufacturer of stoves at Chattanooga, as illustrative, or any other stove manufacturing point in the South, is to have his transportation rates to the consuming territory of the North equalized with the rates from northern manufacturing points, irrespective of cost, then the competing manufacturer in the North is entitled to the same price at his factory on the raw products entering into the manufacture of stoves as is available to the Chattanooga manufacturer. Moreover, if the federal government is to equalize transportation rates, irrespective of the cost of the service, it should likewise equalize labor costs. In the final analysis, I submit that there is no more justification for one unified system of rail transportation on the theory that it would simplify the freight rate structure than there is justification for one unified company for the manufacture of stoves upon the theory that it would equalize the price structure.

Theoretically, a single unified system of transportation may have some advantages but as a practical matter the competitive system brings about a greater degree of progress. It is argued that under a single unified system, rail carriers could eliminate many duplications; reduce materially operating expenses; facilitate pooling of traffic; and establish uniform accounting systems and better methods of determining cost of operation. But, would the savings and economy, if any, resulting from these practices, offset the losses resulting from the elimination of individual initiative?

Would Result in Cumbersome Industry

In addition to the argument showing that progress has been made under a competitive system of transportation we might set forth some definite and specific objections to a unified system of transportation. First, one unified system of rail transportation for the entire country would result in a tremendously large and cumbersome industry. The difficulty of operation and maintenance of the entire rail transportation system with a reasonable degree of efficiency is readily apparent. This is not confined to transportation systems but in the operation of any large and unwieldy industry there is a certain amount of waste that is bound to result, and smaller units can usually be operated far more efficiently and economically. One of the reasons for the rapid development of motor carrier transportation within the past few years has been the ability of the motor carrier to readily adjust its services and charges to meet the needs of the industry. Motor carriers generally operate for short distances and in relatively small units so that the executive head of the company can keep in close touch with the needs of the shipping public and can promptly make such adjust-

* From an address at the fifteenth annual dinner of the Transportation Club of Evansville, Ind., held in conjunction with the forty-third regular meeting of the Mid-West Shippers Advisory Board on October 7, 1937.

ments as are necessary to fit changed conditions. This is difficult or impossible of accomplishment with a large corporation where certain definite rules and regulations must be followed, and where important changes can only be made after long drawn out procedural steps have been taken.

It has often been stated that one of the problems of the railroads today is their inability, because of restrictive regulation, to meet changed conditions as promptly as necessary. Petitions of the carriers for relief from the provisions of Section 4 of the Interstate Commerce Act present a good example of this condition. In some cases the procedure necessarily requires so much time that even though permission is finally granted to establish the rates proposed, the traffic has been lost during the interim and the adjustment is of no avail to the carriers.

Would Result in One System for All Transportation

A second objection to one unified system of rail transportation is that it would inevitably result in one single transportation system which would include all forms of transportation, thus entirely destroying all competition. Every argument that can be advanced in favor of a single unified system of rail transportation can be advanced with equal force in support of a single unified system of all transportation agencies.

There is no question but that there is a place in our transportation field for each of the four major forms of transportation and that efforts should be made to have each perform that service for which it is best adapted. This, of course, would be an ideal situation if accomplished, but if each agency were composed of one unified system the result would be the complete elimination of competition and the destruction of the initiative of each form of transportation to improve its service for the purpose of securing additional traffic.

Under our present competitive system individual carriers comprising each form of transportation are constantly exerting themselves for the purpose of improving their service and reducing their costs, thereby, endeavoring to increase their traffic. If, on the other hand, we had only one system of transportation there would be no incentive for any particular carrier to display any initiative, and it would be content to handle the traffic in the same old manner from day to day and from year to year without any determined effort to improve facilities or speed up transportation.

It seems to me that this was well demonstrated by the rail carriers themselves during the earlier part of the twentieth century, when they had what was commonly considered a practical monopoly of the transportation business. Subjected to regulation and constant attack by legislative groups they organized for their own defense, and as all land traffic of necessity had to move via rail, there was no real need or incentive to make any important improvements in transportation facilities or services. These conditions, however, have been radically changed within the past few years because of the keen competition offered by motor carriers, by air lines and by increased activity of carriers operating upon the waterways of the nation. Representatives of railroads gradually began to find some means of bringing the traffic back to the rail lines and as a result have made some marked improvements in railroad service. Passenger trains have been air-conditioned; streamlined Diesel-powered trains have been developed; pick-up and delivery service has been established and, generally speaking, carriers are constantly at work in an effort to reduce expense, in-

crease operating efficiency, and perform a greater service at lower cost.

There are still many things which the railroads can do to improve their service, and with the initiative and incentive created through competition there is no doubt in my mind but that the carriers will continue to improve their operations and furnish more complete, better and more economic service to the shipping public.

Federal Control an Example

Another example of what we might properly expect under a unified system of rail transportation is derived from the experience we had during the period of federal control. For many years prior to that time the scheduled time for the transportation of merchandise freight from the Atlantic seaboard to Chicago was third-morning delivery, which schedule was maintained with regularity. During federal control, and in the absence of competition, this schedule was increased to fourth-morning delivery, and this was not made with the same degree of regularity as third morning delivery has been made. The simple reason for this condition was that the cars would arrive in advance of the arbitrary schedule, be placed on a hold track, and the yard crews frequently would forget to place them on the fourth day. It required years, following the termination of federal control, to have the schedule restored to third morning, although after this was done responsible officials of rail carriers freely admitted that the third-morning service was more easy of accomplishment and far more economical than the fourth-morning service.

The railroads of the country still constitute the most important and necessary transportation agency. They rank as one of the most important industries of the country and when, as at present, they are suffering from innumerable burdens the entire country is bound to suffer. It seems to have been a general view of the public and legislative bodies that every possible obstacle should be placed in the way of railroad progress, and that every act of the rail carriers should be regulated and everything they do subjected to close supervision.

Rail carriers at present have reached a position where increased expenses, through burdensome legislation and increases in wages and salaries cannot be met by increased efficiency in operation alone and additional revenue must be secured. While I do not believe that there is at present a danger of having the railroads taken over directly by the federal government, there is a dangerous drift toward government ownership which, if accomplished, is bound to result finally in government operation of all transportation agencies. As representatives of industries and railroads it is our definite duty to organize and do all that we can to prevent this condition from happening.

Suggestions for Preventing Unification

I suggest that as an effort to a solution of the present transportation problem, and as a barrier against the adoption of one unified system of rail transportation that, first, the regional advisory boards, acting as a committee, take up the burden of educating the public, upon the importance of maintaining our present competitive system of rail transportation, in order that there may be a better understanding of the present situation and more intelligent study of changes that may be necessary to meet changed conditions. The general voting public will not stop to analyze these conditions; they must be advised by the representatives of transportation agencies

and industry and once they know the facts there is no doubt in my mind but that the present trend will be rapidly halted.

Second, members of the regional advisory boards and all other representatives of industry and transportation agencies should actively oppose legislation which would restrict and further burden the rail carriers. They should also get actively behind any movement to relieve the carriers from some of the present regulation which is unduly burdensome and which under changed conditions is no longer necessary for the protection of the public.

Third, the rail carriers themselves can do much to relieve the present situation and prevent attempts to establish a single unified system of rail transportation. They

can and should place into effect some if not all of the improvements which it has been suggested can be brought about through a single agency. Simplification of tariffs and rate structures, pooling of traffic and elimination of certain wasteful practices can be accomplished by the rail carriers themselves under our present system without the necessity of combining all rail carriers into one unified system. If rail carriers will do these things, secure the co-operation and confidence of the public and the help and co-operation of the shippers, then we will be permitted to enjoy an adequate, efficient and progressive privately owned and operated transportation system which, after all, means continued prosperity for the country.

"Hands Off I.C.C.!" — Pettengill

Democratic Congressman from Indiana defends the independent commissions before Associated Traffic Clubs

OUTSPOKEN criticism of the Administration's reorganization program, which would destroy the independence of the federal commissions—among them the I.C.C.—was expressed by Hon. Samuel B. Pettengill, Democratic member of Congress from Indiana, addressing the Associated Traffic Clubs of America at St. Louis on October 12. Going back to the findings of the National Transportation Committee (the "Coolidge Committee") Mr. Pettengill said that many of the factors affecting the railroad situation today are the same as when that committee made its report, and that "new ones, undreamed of in the philosophy of the early '30's, have come into being." Of these he named two—the attack on the Supreme Court and the other, "the attempt to destroy the independence of the government's great regulatory bodies." Continuing he said in part:

"The reorganization bill, in broad outline, is designed to put the administrative commissions under cabinet members with the usual power to hire and fire. Among these agencies are the Interstate Commerce Commission, the Federal Trade Commission, the United States Tariff Commission, the Federal Power Commission, the Federal Communications Commission, the Securities and Exchange Commission, etc.

Civil Service at Its Lowest State

"The reorganization bill, in short, is to cause railroads, trucks, buses, water carriers, hydro-electric power, telephone, telegraph, radio, trade practices, competition, the issuance of securities and therefore credit control, and dozens of other important functions of thousands of industries, to be sickled o'er with the pale hue of politics. All this to be contemporaneous with the civil service being at the lowest estate in a generation. Economic problems are to be placed at a still greater hazard of political answers.

"Take radio, for example. Presumably the Communications Commission is to be made a branch of the Post Office Department. I leave to your imagination the enormous pressure to abuse, and the hidden blackjack if the control of radio, especially during political campaigns, is ever put in the hands of any Postmaster Gen-

eral—Republican or Democratic—Will Hays or James Farley—who is, by the code of politics, the present or past head of the political machine of the party in power which wants to stay in power.

A Political Commission

"Take the Interstate Commerce Commission. Suppose it ever comes under the domination of an administration committed to government ownership. Under such control it is easy to imagine how nationalization would become inevitable. The carriers would be subjected to financial starvation so that the government would be the only buyer at sheriff's sale. The starvation diet could be prescribed by Congress or by the executive branch alone without even consulting Congress or changing existing law.

"Couple that with a Supreme Court that would co-operate with the executive and would not undertake to override the judgment of Congress on legislative policy, however confiscatory such policy might be, and the deed is done. The sturdy bondholders would join the socialistic parade in the frantic hope of salvaging some poor part of their investment before it is too late.

"There is no apparent intention to bring this program to pass. I am talking about the danger of the abuse of concentrated power, which no wise statesman or citizen should ever minimize. I am talking about the fear of the abuse of this power, if the reorganization bill passes as proposed, on the part of the prospective investor in the transportation securities of the nation. I suggest in the interest of recovery and prosperity, that he be relieved of this legislative nightmare by the defeat of the dangerous concentration of power contained in this bill.

State Socialism

"It is no secret that the members of the great Commissions at Washington do not want their independence destroyed. It is no secret that they are grateful to the members of Congress who are fighting for their independence. It is no secret that they will be grateful to

you if you let your Congressmen know that you want these Commission members to be free men, and not the water boys of politics. I invite you to lend a hand.

"The last stand against state socialism will be made by the railroads. When and if they go, who then is safe, who then is secure, whether engaged in competing transportation agencies, or in any form of business or industry?"

"I hold no brief for the rails as against other carriers. I mention them only because they are nearest the gun. The present problem of the rails is the potential future problem of all other carriers and of all other business. That problem is to keep alive under private ownership.

"I hold that the consumer of transportation, like all other consumers, is entitled to most and best for least. If on a fair field and in an equal struggle the railroads were to follow the streetcar, the interurban and the canal to the scrap pile, let them go! It would be tough on their owners but it is the price of progress. I have no sympathy with the planners who would handicap each horse with legislative weights to insure that none will win!

"I unequivocally endorse the position of the National Transportation Committee that economic competition must decide the question of survival as between the rails and their competitors.

The railroads filled the canals with silt and weeds; coal oil drove the whales back to the sea; natural gas turned out the kerosene lamp; the incandescent bulb makes the going tough for the gas jet. But mankind marches on and has made and will always make its greatest progress when no lobby at Washington or the State Capitol holds the umbrella of political paternalism over inefficiency and senility.

Business Men Do More Damage Than the Reds

"What I fear more than the socialist or communist is the American business man completely discrediting the whole system of free enterprise and constitutional democracy by rushing to Washington to put legislative shackles on his competitor and creating a law made monopoly for himself, the end result of which is to reduce the total production of goods and services—the nation's wealth, which in turn increases the cost of living, reduces the standard of living and so increases social unrest. It is almost certain that the limitless potentialities of our science and technology and their promise of the more abundant life, which is the just aspiration of every American home, are being stifled by all this effort to advance by legislation the interest of some particular class or group.

"It is probable that in their total aspect the wealth and purchasing power of the nation as a whole is not increased a nickel, and that the pocket of some American is impoverished by the exact amount by which some other pocket is legislatively enriched. In 1936 total national income was less than before the depression, despite a population increase of 6.4 per cent. When I contemplate busybodies with their vast plans for directing the lives and enriching the purses of millions yet unborn, I feel like going up to one of them and asking him, kind, sir, please tell me the price of wheat next Saturday!

"Thomas Jefferson once said that it is the true business of government to prevent men from injuring one another, but leave them otherwise free to follow their own pursuits of industry and employment. If the whole history of the human race means anything, nations become prosperous as a result of being free.

"It is the American business man, the chief beneficiary of our system of free enterprise, who has given that

system its worst black eye by being a party of this Chinese maze of privilege, protection, subsidy, monopoly and price fixing that is strangling the creation of wealth. I say this as the friend of business and of American institutions. It may be that I am naive to even hope for a cessation of this struggle for power in legislative halls, group against group, but I am certain that it paves the way for the Man on Horseback.

"In a notable paper three years ago Gustave Cassel of Sweden pointed out that the pressures of business interests upon government for special privilege for themselves or legislative handcuffs for their competitors leads inevitably toward planned economy and hence to dictatorship. *Because government grants favors to capitalists, it is appealed to, by voters, to grant equalizing favors to workers and farmers.*

"Because it creates agencies to benefit producers, it must create other agencies to protect consumers—the consumer's bureau and the producer's bureau each lobbying Congress for more money to checkmate the other! And so government goes about grasping for more and more power to cope with the abuse of the privileges it has itself created. Out of this tanglefoot that is throttling free enterprise there is an opportunity for an economic Abraham Lincoln who will free business men from the shackles wrought not by communists, but by themselves.

Democratic Program

"In the campaign of 1932 Mr. Roosevelt suggested several planks of a transportation program. One was the regulation of motor carriers by the Interstate Commerce Commission. That has been done and I am happy to have helped it along. Another was the repeal of the recapture clause. It is repealed. Another was the overhauling of the federal receivership law. It is overhauled. Another suggestion was the creation of a co-ordinator. Mr. Eastman became co-ordinator and ceased to be co-ordinator, leaving many valuable suggestions. The co-ordinator statute expressed the desire of Congress that the railroad situation be improved.

"But the more comprehensive national transportation policy to be presented to Congress in 1934 has not been formulated. What remains to be done? The problem has never been better summarized than by Mr. Roosevelt in his 1932 Salt Lake City speech when he said:

My policy goes to the root of the difficulty. While I would do everything possible to avert receiverships which now threaten us, I seek to bring the operating balance sheets of the railroads out of the red and put them in the black.

"That was five years ago. Despite a greatly desired recovery in many industries our largest industry still faces difficulties which make its plight of immediate national concern.

Stormy Weather Ahead

"The percentage of railway mileage in receivership is 29.2. Another 10 per cent escaped the sheriff, but 39 per cent of total mileage was in the red in 1936 after four years of general recovery. For all Class I roads, for the five years 1932-1936, net income after fixed charges, including interest, averaged only \$2,043,087, or one-quarter of one per cent on equity securities of \$8,029,964,698. This is a five-year average of two bits on \$100 of stocks, as against 5¾ per cent, considered a fair capital return only a few years ago. Meantime, hundreds of millions of bonds are in default.

"In the light of this record is it any wonder that the recognized spokesman for savings banks and insurance

companies, the largest holders of railway securities, has recently announced that they would make no 'further substantial investments in the railroad field unless and until the future of the transportation industry is more encouragingly indicated than it is today.'

"If that market is closed where will the roads go to finance the purchase of even the new equipment and deferred maintenance so greatly needed and which would contribute so much to the reemployment of idle Americans?"

Mr. Pettengill then mentioned the loans of the R.F.C. and the P.W.A. to the railroads and reviewed recent trends in earnings and expenses.

"The railroads are suffering from monetary rickets. The depression aggravated the disease but did not cause it. The cause is financial malnutrition of long standing. The fact is that during not a single year in the 17 years since 1920 have Class I roads earned the fair return contemplated by the Transportation Act of that year. Railroad credit has been gradually undermined in prosperity and depression. In prosperous years they were not permitted to accumulate any fat for the seven lean years since 1930.

"When it is held in mind that it is not gross, but only net income that creates credit, the seriousness of the situation to the roads, and to the heavy industries whose prosperity depends in so large degree upon them, is so clear that he who runs may read, if he *will* read!

"The private market for railroad securities, if it is not to be lost forever, needs tangible assurance that government is going to adopt the 'comprehensive national transportation policy' which President Roosevelt promised in 1933. Meantime, the 'cat and mouse' treatment of the roads by the Interstate Commerce Commission ought to end. In saying this, I speak as the friend of the I.C.C., whose sincerity of purpose and disinterestedness of action over a half century have established it as the greatest government commission in the world.

"In the stress of daily problems, however, it seems to me it sometimes permits the trees to obstruct the forest. It may be that the Commission is overworked and understaffed. If so, it is the fault of Congress, and I will do my small part to correct it. But whatever the cause or causes, the need of a large over-all grasp of the whole situation is the imperative need of all of the nation's transportation agencies and the nation itself. Labor strikes are costly to all concerned. But sometimes labor gains a benefit as a result. However, *a strike of capital is a game in which no one wins*. The strike of railroad capital is not 'around the corner.' It is here and it threatens distress if not actual disaster in ever widening circles. The recent furloughing of some 30,000 employees is the unfortunate proof.

"It is not to be forgotten that someone must be found with \$26,000 which he is willing to invest in railroad plant and equipment, for each man on the pay roll. This proves the essential partnership between capital and labor. Neither will work for long without a fair wage. The dissolution of the partnership leaves no alternative but unloading on Uncle Sam. As Mr. Eastman has so well said, if government ownership comes 'the impelling motive probably will not be logic, or theory, but the practical one that private enterprise and capital will not be able to carry on.'

The Constitution and Transportation

"The constitution and transportation are definitely linked together. Nothing did more to wring a reluctant consent to the adoption of the Constitution than the bit-

ter need of freeing commerce from the restrictions which were strangling it and the growth and prosperity of a young free people. Those restrictions were then imposed by the thirteen states. There is danger now that they will be reimposed by the nation.

"The men who wrote the Constitution intended commerce to be free from every shackle designed to build up one group or section or interest at the expense of other groups or sections or interests. They repudiated the mercantilist philosophy and set down on parchment their faith in free men and free enterprise. No greater concept of government ever came from the brain of men. Under it every producer of wealth has today free access to a market of 130,000,000 people. Under it every consumer has a *nation* to supply his needs.

"This means that industry, mining, ranching, fishing, agriculture, lumbering, etc., can locate where conditions serve it best. It means that 130,000,000 people can buy where they can buy cheapest, and sell where they can sell dearest. It means that the cost of living has gone down and the standard of living has gone up. It means more goods to more people, which means more jobs to more men. It means most and best for least. It means America.

"But throughout the years these ancient landmarks have been in constant danger of being swept away by the legislative pressures of groups and states under the provincial and mistaken hope that they can build up their own economy at the expense of the nation. It is probable that there is no city council, no state legislature anywhere where these efforts have not repeatedly been made. That the landmarks have stood is due, and due only to the fact that we have had a great Court whose members are responsible not to the clamor of voters, the pressure of party, the will of legislators, the command of governors, or the power of presidents, but to Constitution and conscience alone.

"It would seem that a Constitution and a Court with the growth of a mighty nation as their legacy would, when attacked, find millions of angry men rushing to their defense. Many did so recently, but not enough to make the future safe. The assault upon the Court will go on; the undermining of constitutional government will go on; the sapping of the moral foundations of the nation will go on. If in the elections next year the Senators, Democrat or Republican, who stood like Spartan soldiers these recent months are 'knocked off,' the end of constitutional government will probably be witnessed by yourselves. The defeat of these men would be a 'mandate' which no one can gainsay. But a vote of confidence in these men will also be a 'mandate,' a mandate that we will tolerate no short cuts in the fundamental law of the land.

Situation is Grave

"The gravity of the situation is very great. Only fools will laugh it off; only ignorance will brush it aside; only the avowed enemies of free government will pretend it does not exist. It does exist. It exists in the field of transportation and it affects the lives of the millions engaged in it.

"I have already indicated the danger to the transportation industry if the Interstate Commerce Commission ever comes under the thumb of an administration committed to government ownership. You need, however, not only an independent Commission, but an independent Court. Already we hear agitation that 'due process' be limited strictly to matters of form and procedure and not to the substance of constitutional rights.

"This means very simply that the power of legislatures and Commissions is to be increased. It means that the rates and the income of public service corporations are to be at the mercy of legislative bodies or of regulatory commissions, provided it is all done with punctilious observance of procedural etiquette. It means that legislatures and Commissions may enforce rates under which public service industries cannot live and thus be forced into bankruptcy and thence into public ownership. As Lord Byron once said of one of his characters, 'He is the mildest mannered man that ever scuttled ship, or slit a throat with all true bearing of a gentleman.'

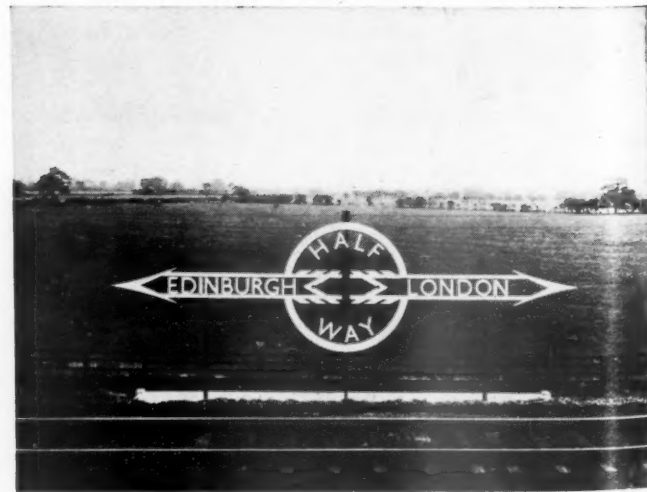
"I leave it to your imagination to ponder the final result with reference to industries in which shippers and passengers will always outvote owners and investors. This is only one step in the threatened breakdown of constitutional morality. Militant voices are heard to the effect that the railroads should not be permitted to pay their debts, to recognize their contractual obligations. This is sugarcoated with high-sounding phrases such as 'the necessity for reorganizing capital structures,' even with respect to railroads admittedly solvent.

"So long as the Constitution and a free Court stand there is certain assurance that property rights and the

standards of business integrity upon which our nation rests, will not be thrown to the wolves of politics. If, however, our courts are to become a part of the political branches of government this assurance is 'gone with the wind.' When and if such assurance vanishes where will you get the money to rebuild and reequip the transportation agencies of this country except out of the federal treasury?

"I have heard it said many times that you cannot eat the Constitution. I have heard this said too many times. As a scientific statement of dietary fact the statement is obviously correct. It is, however, no more correct than to say you cannot eat the Ten Commandments nor the Sermon on the Mount. Those who go about this country today, in high places and low, saying that you cannot eat the Constitution, do not make the statement as a scientific fact of diet and digestion. The statement is made to discredit the Constitution of the United States, and to destroy the faith of our people in the thing our fathers wrought. It may be that one cannot eat the Constitution, but under its protection more people have eaten more bread for a longer period of time here in America than any other people under any other form of government in human history."

Signs Which Passengers Can Read



The London & North Eastern Is Making Window Gazing More Interesting for Its Passengers by Erecting Legible Signs Such as Those Pictured Here, to Call Attention to Interesting Geographical Features

Superheat Versus Steam Pressure

A discussion of the selection of steam pressures and temperatures for prevailing locomotive designs

By H. B. Oatley

Vice-President, The Superheater Company

THE trend in both stationary and marine practice toward increased initial steam temperatures and higher steam pressures has been more rapid than in locomotive service, due in a large measure to the less severe restrictions as to bulk and weight of steam generators. In these services a wide variety of prime mover types has been used and a varied set of conditions for the use of the steam generated has been encountered. These latter conditions have brought about a considerable range in both pressure and temperature combinations which have been justified by the carefully worked out heat balances for each case.

The conditions to be met in locomotive service are such that with the prevailing standards, less freedom can be exercised in the selection of steam pressure and initial steam temperature.

The restrictions in the size and weight of locomotive boilers are well known. The necessity of keeping locomotive weights within the allowable limits of wheel load has been urgent for many years, and with the present-day demand for higher speeds, the problem of reducing the axle load has made the consideration of all locomotive detail weights a subject of paramount importance.

The conventional form of locomotive boiler, with stay-bolted firebox, has placed a rather definite limit on boiler pressure. It is generally considered that 300 lb. per sq. in. is the limit for such boilers, although a few instances are on record of somewhat higher pressures. With watertube fireboxes, pressures of 350 lb. per sq. in. have been used with success, and experiments with even higher pressures have shown that, structurally, the opportunity exists of using very much higher steam pressures.

The question of steam pressure, apart from the boiler has to be considered with respect to the prime mover utilizing the steam. The conventional prime mover is a reciprocating single-expansion non-condensing engine with piston valves operated by one of several types of valve motion.

Taking into consideration only the engine efficiency, it would be desirable to expand the steam down to the back pressure. However, limitations in cylinder sizes and the impossibility of satisfactory operation with too short cut-offs require a terminal expansion pressure higher than the back pressure. Terminal expansion pressure here designates the theoretical pressure which would be obtained by arranging the point of release at the end of the stroke. This point is more suited for comparison than the actual release pressure because the latter changes with the conventional valve motions when the cut-off for the same expansion curve is reduced with higher admission pressures. Assuming a terminal expansion pressure of 35 lb. per sq. in., gage, a 26 per cent nominal cut-off will be necessary with 200 lb. per sq. in., gage, initial pressure; with 350 lb. initial pressure a 14 per cent nominal cut-off, and with 500 lb. initial pressure a

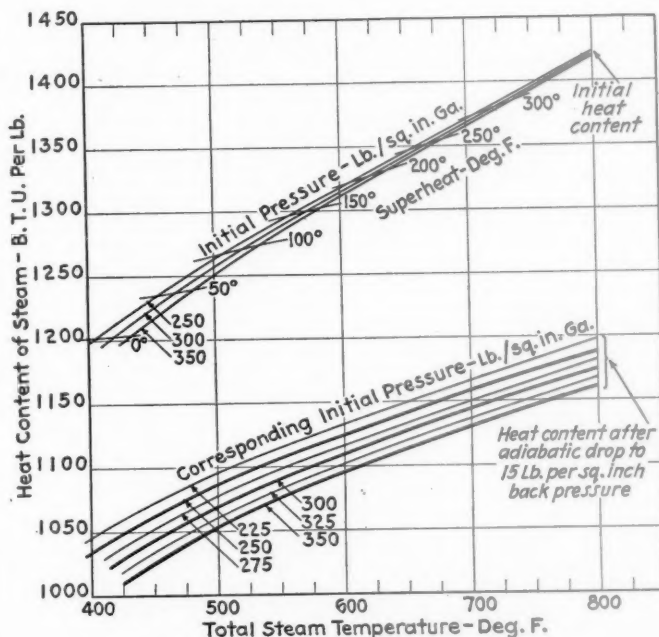


Fig. 1—Heat Content of Steam for Various Pressures Plotted Against Temperature

8.5 per cent cut-off. With a more desirable lower terminal expansion pressure of 15 lb. per sq. in. gage there would be required a 15 per cent nominal cut-off with 200 lb.; a 6 per cent cut-off with 350 lb.; and a 23 per cent cut-off with 500 lb. per sq. in. initial pressure.

Conventional valve motions rarely give satisfactory service, at high speeds and satisfactorily low maintenance cost, at less than 20 per cent or possibly 15 per cent cut-off. Hence, if the efficient use of steam in the cylinder is sought, the initial pressure should not exceed 300 lb. per sq. in. unless means can be found to permit shorter cut-offs which will permit favorable maintenance and give satisfactory road service, or unless provision can be made for lowering the back pressure. Operation with shorter cut-offs may be obtained by the use of poppet valves with a separate functioning of admission and release events. Lowering the back pressure to any considerable extent, can be obtained only by condensing operation. Experience has thus far shown that more success has been attained, when all factors are considered, by the use of poppet valves than by condensing operation.

In the foregoing, steam pressure has been referred to as the initial pressure in the cylinder. There is, of course, an unavoidable loss of pressure between the boiler and the cylinder. That all reasonable steps should be taken to minimize this pressure drop is well recognized. Adequate area through the dry pipe, throttle, steam pipes, cylinder and valve passages and ports should be provided. Area through the superheater should be com-

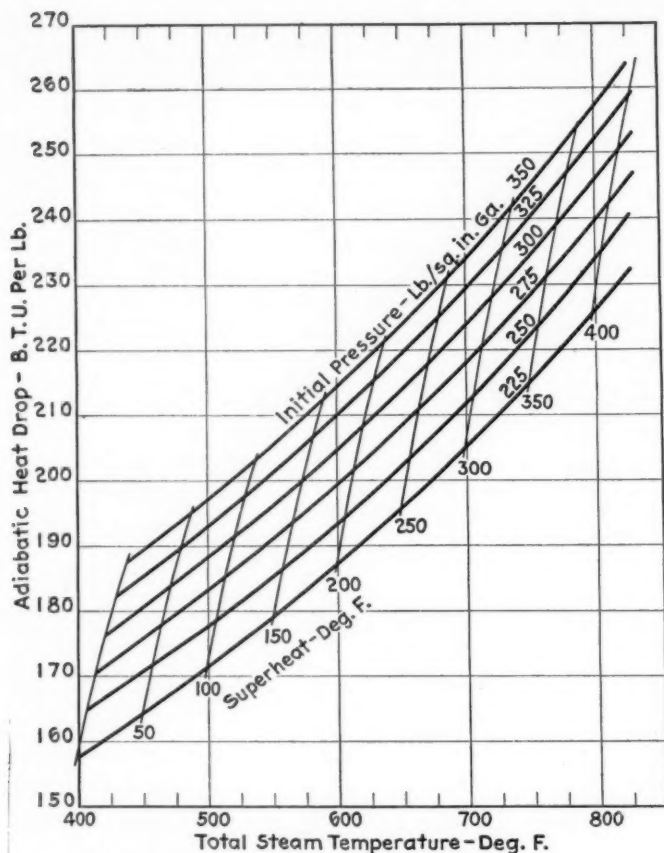


Fig. 2—Adiabatic Heat Drop to 15 Lb. Back Pressure

mensurate with proper size, design and the degree of superheat desired.

Superheater Subject to Different Conditions

Conditions with respect to the superheater units, however, are markedly different from those to which other steam-carrying parts are subjected. The units are, by their nature, subjected to very much higher metal temperatures than any other pressure carrying part on the locomotive. Steam velocities through the units, therefore, must be provided which will, throughout the wide range of steam requirements, assure an adequate cooling effect and provide satisfactory life of the units. Provision of too large a steam area with resulting low velocities, and decreased drop in steam pressure, cannot be carried too far without incurring early renewal of the units. Other steam carrying parts, which may contribute extensively to the loss in pressure, can be designed to provide a larger steam area with resulting advantage, and without subjecting them to more rapid deterioration.

Apart from the matter of steam pressures, the question of superheat, or rather initial steam temperature, is a matter of importance. Common practice in this country at the present time utilizes steam temperatures of from 625 deg. F. to 650 deg. F. with some locomotives operating successfully at from 700 deg. F. to 725 deg. F. Lubrication, packing and bushing difficulties are largely a thing of the past. Sporadic packing trouble shows, when investigated, a lapse of care in the selection of the lubricant, the use of unauthorized material or lack of proper maintenance of packing rings. That the still higher steam temperatures, probably up to 850 deg. F., can be advantageously used in reciprocating steam engines is a confident belief, supported by experience abroad.

The relative advantages of increasing steam tempera-

ture or increasing steam pressure or a combination of the two, is frequently a matter of discussion. Considering the question, purely from a thermo-dynamic standpoint, comparative data can be obtained from the steam tables and the Mollier diagram.* They are arranged in Table I for pressures and temperatures within practical range. Adiabatic expansion of the steam is assumed, from the various initial pressures and temperatures, to a common back pressure of 15 lb. per sq. in. gage which is an average for locomotive engines exhausting into the atmosphere. The heat drop and steam consumption figures are of course theoretical as they do not take into consideration losses due to friction, radiation, wiredrawing, compression and incomplete expansion caused by the above mentioned difference between thermal expansion pressure and back pressure due to cylinder limitations. However, it is proper to assume that these losses affect the results equally within the limited range under consideration and the table therefore gives a fair comparison of the possible gain from increased pressures and temperatures.

To bring out the results more clearly, a series of curves has been plotted from the data of the table.

Fig. 1 shows the heat content of the initial and exhaust steam for the various pressures plotted against initial steam temperature. It will be noted that for a certain temperature the heat content of the initial steam changes only slightly for various pressures while the heat content of the exhaust drops considerably with increasing pressure. Furthermore, the spread between the two groups of curves becomes wider with increasing initial temperature.

Fig. 2 is derived from the curves on Fig. 1 and gives the adiabatic drop between the same initial pressure and the common back pressure of 15 lb. per sq. in. gage, at the temperature range from 400 to 800 deg. F. There is a marked increase in the heat drop per pound of steam at all pressures with increasing initial steam temperatures. For instance, with 225 lb. per sq. in. gage, initial pressure and 700 deg. F. initial temperature, the same heat drop of 205 B.t.u. per lb. is obtained as there is from 350 lb. per sq. in., gage, initial pressure and 550 deg. F. temperature.

* Keenan & Keyes, Thermo-dynamic Properties of Steam, J. Wiley & Son, 1936.

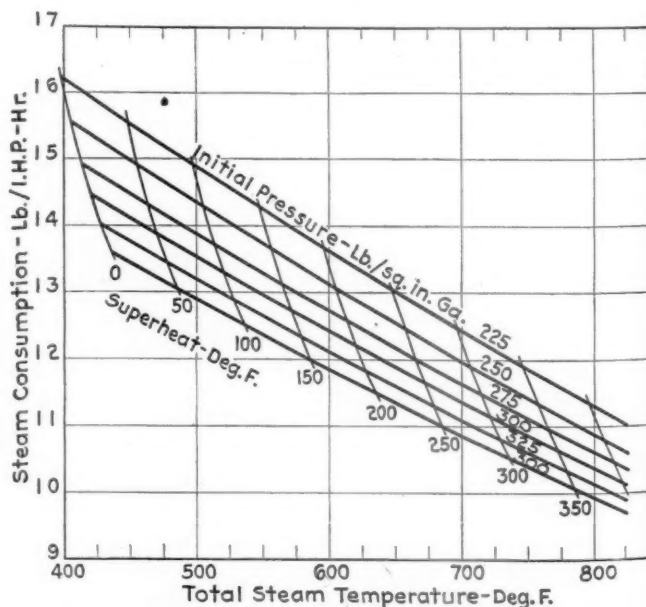


Fig. 3—Steam Consumption with Adiabatic Heat Drop to 15 Lb. Back Pressure

Table I—Effect of Superheat and Steam Pressure on Steam Consumption

Initial pressure, lb.		Steam temperature, deg. F.	Superheat, deg. F.	Heat content, B.t.u. per lb.		Adiabatic heat drop, B.t.u. per lb.	Lb. steam per i. hp. hr.	Heat drop		Heat in ex. steam per i. hp. hr. B.t.u.
Gage	Abs.			Initial	At back pres. of 15 lb. gage			As increase over Sat. steam, per cent	As per cent heat in Initial steam per lb.	
225	240	397.4	0	1,201	1,044	157	16.22	...	13.08	16,950
		500	102.6	1,265	1,094	171	14.88	9.0	13.52	16,300
		600	202.6	1,319	1,132	187	13.62	19.2	14.2	15,410
		700	302.6	1,371	1,166	205	12.42	30.7	14.95	14,480
		800	402.6	1,423	1,197	226	11.26	44.0	15.88	13,470
250	265	406.1	0	1,202	1,037	165	15.43	...	13.72	16,020
		500	93.9	1,262	1,085	177	14.39	7.2	14.02	15,620
		600	193.9	1,317	1,124	193	13.19	17.0	14.68	14,830
		700	293.9	1,370	1,158	212	12.00	28.5	15.50	13,900
		800	393.9	1,422	1,188	234	10.88	42.0	16.44	12,920
275	290	414.2	0	1,203	1,032	171	14.88	...	14.22	15,390
		500	85.8	1,259	1,076	183	13.90	7.0	14.55	14,940
		600	185.8	1,315	1,116	199	12.79	16.2	15.13	14,260
		700	285.8	1,369	1,150	219	11.63	28.0	16.01	13,380
		800	385.8	1,421	1,181	240	10.61	40.2	16.88	12,540
300	315	421.8	0	1,203	1,027	176	14.47	...	14.63	14,870
		500	78.2	1,256	1,068	188	13.53	6.8	14.99	14,450
		600	178.2	1,314	1,109	205	12.42	16.5	15.6	13,770
		700	278.2	1,367	1,143	224	11.35	27.2	16.4	13,000
		800	378.2	1,420	1,174	246	10.35	39.8	17.3	12,180
325	340	429.0	0	1,204	1,022	182	14.00	...	15.1	14,310
		500	71	1,253	1,060	193	13.18	6.1	15.4	13,950
		600	171	1,312	1,102	210	12.12	15.4	16.0	13,340
		700	271	1,366	1,136	230	11.07	26.3	16.85	12,560
		800	371	1,419	1,167	252	10.10	38.5	17.78	11,780
350	365	435.7	0	1,204	1,017	187	13.62	...	15.52	13,830
		500	64.3	1,250	1,053	197	12.92	5.2	15.78	13,630
		600	164.3	1,310	1,096	214	11.90	14.6	16.35	13,040
		700	264.3	1,365	1,131	234	10.88	25.2	17.13	12,300
		800	364.3	1,418	1,161	257	9.90	37.5	18.15	11,500

The heat drop between initial and back pressure is proportional to the amount of work that can be obtained from the steam. As one horsepower-hour is equivalent to 2,545 B.t.u. the steam consumption per indicated hp.-hr. can be calculated from the heat drop and is shown in Fig. 3. The rapid fall in steam consumption per indicated hp.-hr. with increasing total temperature is significant. With adiabatic expansion, a steam rate of 12.4 lb. per indicated hp.-hr. is obtained with an initial pressure of 225 lb. per sq. in. gage, and 700 deg. F. initial temperature. The same steam rate would result with an initial pressure of 350 lb. per sq. in. gage, at a total temperature of 550 deg. With a total temperature of 700 deg. F. and 350 lb. initial pressure a steam rate of 10.9 lb. per indicated hp.-hr. would be obtained.

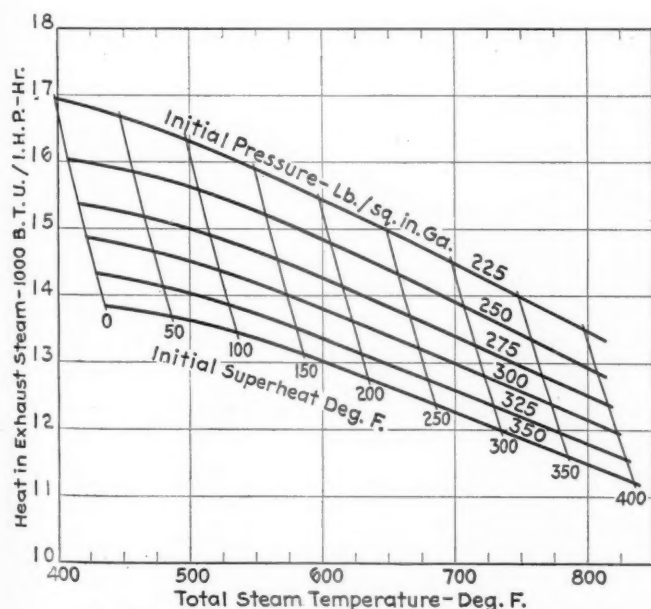


Fig. 4—Heat Rejected by Exhaust Steam Plotted Against Initial Steam Temperature

From Fig. 1 it can be seen that the amount of heat rejected per pound of exhaust steam increases with higher initial temperatures. This results of course in drier exhaust steam or more superheat in the exhaust.

Frequently any superheat in the exhaust is regarded as evidence of too much initial superheat and the conclusion is drawn that no economy can be obtained by increasing the initial temperature still further. This, however, is incorrect as the real measure of cylinder performance is the amount of heat converted into work in relation to the total heat supplied to the cylinder.

From the heat content of the exhaust steam and the steam consumption per indicated hp.-hr. the amount of heat rejected by the exhaust steam can be calculated and is plotted in Fig. 4 against initial steam temperature. The lesson to be drawn from this is that for any initial pressure there is less heat passing out of the cylinder per unit of work, or per unit of time, with increased initial temperature. For example, with 225 lb. per sq. in. gage, initial pressure and 500 deg. F. initial temperature, 16,300 B.t.u. are exhausted per indicated hp.-hr. When the initial steam has a total temperature of 700 deg. F. only 14,480 B.t.u. are exhausted per indicated hp.-hr. in spite of the higher exhaust temperature. There is also a decreasing amount of heat in the exhaust steam with increasing initial pressures for any given initial steam temperature. For example: with 700 deg. F. initial temperature, the heat in the exhaust steam will be reduced from 14,480 B.t.u. at 225 lb. per sq. in. in gage initial pressure to 12,300 B.t.u. at 350 lb. per sq. in. gage initial pressure.

THE INAUGURATION of the biggest speed-up on record of the services of the London, Midland & Scottish (Great Britain) became effective September 27 when wholesale reductions in the running time between London, Leicester, Nottingham, Sheffield, Leeds and Bradford were made after a series of trial runs over these routes. A total of 62 trains are now operated at start-to-stop average speeds of 60 miles per hour or more, covering an aggregate daily mileage of 6,145 miles.

Railway Payments To Public For Incidentals Loom Large

Over \$300,000,000 paid out by carriers last year besides taxes, interest, dividends and purchases

THE extent to which the public benefits directly from the expenditures made by railroads out of their earnings is not limited to the taxes, interest and dividends paid nor the purchases made for materials and equipment, but also includes an imposing sum for expenditures which have received slight attention at best, even by railroad men, as shown by a compilation of railway spending the *Railway Age* has just made.

These "forgotten" purchases include expenditures for telephone and telegraph, electric light and energy, heat and power, payments for construction and other contract work, for newspaper and magazine advertising, for rent of office buildings, for insurance premiums, payments to doctors and hospitals, contributions to associations, bureaus and clubs and rent for private cars, for which the railroads are estimated to have spent \$300,000,000 in 1936.

This estimate is based on statistics reported by 32 roads for the year 1936 and was arrived at by assuming that the payments made by all the Class I roads were as much larger than the payments made by the 32 railroads as the total purchases made by the Class I roads in 1936 for material and supplies were larger than the purchases of the 32 roads. This total was then subdivided in the same proportion that the subdivided payments reported by the 32 railroads were to their total payments. The figures are estimates, for the reason that more railroads were not able to compile the information and because the records furnished were not all uniformly complete, as where some of the payments could not be segregated by the carriers or were included

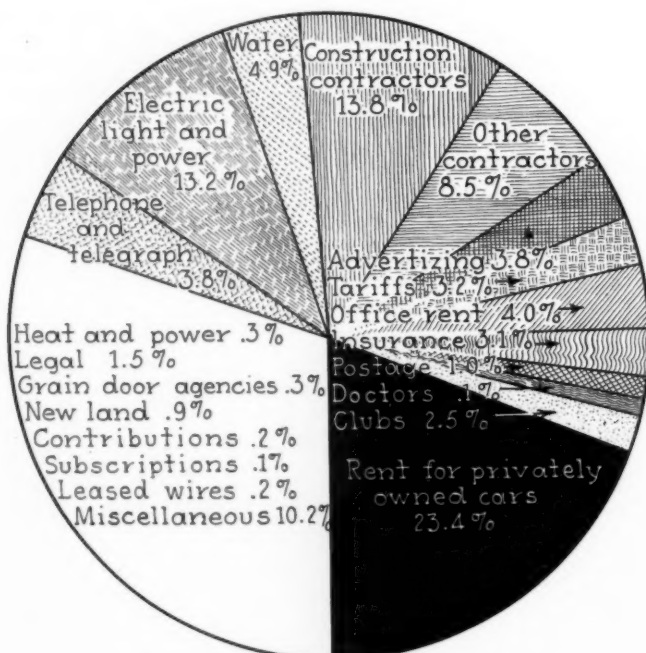
in their purchases. Payments made for electric energy by the Pennsylvania, the New York Central, the Illinois Central and the Great Northern were not available; and it is considered probable that the expenditures reported by the 32 railroads for advertising were not representa-

Payments Made to the Public—1936—Estimated Other than Purchases of Materials and Equipment, Taxes, Interest, Dividends, Traveling Expenses

Telephone and telegraph	\$11,400,000
Electric light and power	39,600,000
Water	14,700,000
Heat and power (gas)	900,000
Payments to construction contractors	41,400,000
Other contract work	25,500,000
Legal	4,500,000
Advertising	11,400,000
Tariffs	9,600,000
Rent of offices, buildings, land, etc.	12,000,000
Insurance—premiums	9,300,000
Postage	3,000,000
Grain door agencies	900,000
Doctors, druggists, hospitals, etc.	3,300,000
Associations, bureaus and clubs	7,500,000
Land and building purchases	2,700,000
Contributions	600,000
Subscription to periodicals, etc.	300,000
Rental of privately owned cars	70,200,000
Rent for telegraph wires, cables, clocks and construction ...	600,000
All other	30,600,000
Total	\$300,000,000
Per cent of materials and fuel purchased	37.4
Per cent of materials purchased less fuel	62.6

tive of all the payments chargeable to so loosely defined an account. The figures, however, represent the best information of the kind which has been developed up to the present, and are believed to under-state rather than to over-state the payments made by all the roads.

During 1936, the railroads are shown to have spent approximately \$11,400,000 for telephone and telegraph



Divisions of the "Forgotten" Railway Dollar

Payments to the Public by Representative Railroads

	Telephone and telegraph	Heat, light, and water and power	All Items	Per cent materials and fuel	Per cent of Op. Exp.
Alton & Sou.	\$3,582	\$5,795	\$46,624	20.8	...
A. B. & C.	7,655	38,086	422,954	44.6	13.9
Bang. & Aroos.	8,554	31,422	448,516	35.8	11.2
Belt Ry. of Chgo.	12,689	30,924	253,577	23.4	...
Burlington-R. I.	2,335	2,760	44,829	52.5	4.6
Cent. of N. J.	61,024	438,523	1,855,407	34.0	7.8
C. & E. I.	42,234	102,419	581,952	19.7	4.9
C. & I. M.	13,860	29,133	330,681	64.5	14.1
C. B. & Q.	335,001	739,940	7,263,078	34.0	10.2
C. M. St. P. & P.	266,345	1,567,888	6,830,402	28.3	8.0
Clinchfield	7,686	19,916	91,786	10.3	2.6
Colo. & Sou.	7,652	35,513	355,191	22.8	6.2
D. L. & W.	110,000	910,000	3,183,000	31.2	8.1
D. & T. S. L.	2,960	14,100	45,004	9.3	2.6
D. S. S. & A.	3,125	9,440	86,902	15.9	4.3
Ft. S. & W.	2,329	7,254	43,099	31.5	6.6
Ft. W. & D. C.	10,272	101,124	490,185	43.0	12.0
G. M. & N.	40,077	45,841	447,086	34.4	10.0
K. C. Term'l.	6,533	60,501	318,538	39.0	...
L. S. & I.	2,168	755	80,511	21.1	6.6
M. St. P. & S. S. M.	41,269	115,564	1,400,223	28.4	6.7
Miss. Cent.	2,458	6,477	42,528	24.0	5.9
Nev. Nor.	772	5,163	23,943	13.3	7.4
N. Y. N. H. & H.	181,100	1,638,126	4,996,146	37.4	8.5
N. & W.	62,203	404,783	6,369,285	35.6	12.7
P. & P. U.	7,969	17,173	165,725	41.0	...
P. S. & N.	3,284	10,303	80,336	43.9	8.9
Reading	250,403	817,021	2,677,512	29.8	6.6
Spokane, Int.	2,859	3,879	40,957	27.7	7.0
Term'l of St. L.	31,495	169,282	959,447	64.0	...
Utah	3,171	6,994	24,684	18.3	3.2
Virginian	11,652	34,641	695,859	21.4	8.8

service and at least \$39,600,000 for electric light and energy. Their purchases of water from municipalities and other water companies totaled approximately \$14,700,000, and their payments to contractors of construction amounted to at least \$41,400,000, while expenditures for cartage and other contract work, including welding and water softening services by commercial firms, amounted to approximately \$25,500,000. The expenditures included approximately \$4,500,000 for outside legal services, over \$11,000,000 for advertising in newspapers and magazines, approximately \$12,000,000 for rent of offices, buildings, land, etc., and approximately \$9,300,000 for insurance premiums. In addition, approximately \$3,000,000 was spent for postage, \$900,000 for grain door agencies, \$3,300,000 for doctors, druggists, hospital expense, etc., and approximately \$7,500,000 for associations, bureaus and clubs. It is also estimated that the railroads paid \$2,700,000 in 1936 for purchases of land and buildings, \$600,000 for miscellaneous contributions, \$300,000 for subscriptions to periodicals and \$70,200,000 of rent for privately owned cars.

The payments in the aggregate were equal to 37 per cent of the purchases made by the railroads in 1936 for materials and supplies and fuel, and 62 per cent of the purchases made for materials and supplies exclusive of fuel, and they were larger in the aggregate than the payments made last year for local, state and federal taxes.

The payments reported by different roads show wide variation in the actual expenditures made, and the ratio between these payments and the corresponding expenditures for material were far from uniform. These ratios varied from 9.3 per cent of the purchases of material and fuel to 64.5 per cent. This variation could result from a lack of completeness with which all the payments were reported as well as the size and kind of the railroads reporting figures. In every instance, however, substantial expenditures were shown to have been made for those materials and services which are not ordinarily included under railway purchases, and, in several instances, the aggregate of such expenditures exceeded the purchases made by the railroads for materials and supplies, exclusive of fuel.

Telegraph and Telephone Convention

Three-day session devoted to technical reports and papers on new developments concerning wire joints, printers and carrier current telephone communication

ALIVE with the same spark that has given new energy to all phases of railroading, the spirit of "the new era" pervaded the Nineteenth Annual Session of the Telegraph and Telephone Section, A.A.R., held at the Medinah Club, Chicago, on October 5, 6, and 7. W. A. Jackson, superintendent telegraph of the New York Central, and chairman of the section, presided over the meeting, which was attended by 305 members, as compared with 266 last year.

R. C. Randall, chairman of the General Committee of the Operating-Transportation Division, A.A.R., made the introductory address. Mr. Randall pointed out that the changes being made in the railroad telegraph and telephone field are revolutionary, and that the progress effected is amazing. He complimented the members of the Telegraph and Telephone Section on their alertness in the application of modern developments to railroading, and congratulated the section on the excellent work being done by its committees. Following Mr. Randall's address, the report of the Committee of Direction was read by W. A. Fairbanks, secretary of the section. A special point of interest is that the T. & T. Section is now a part of the operating division of the A.A.R., and, to bring the organization in harmony with that of the division, the officers are to serve two years instead of one. Therefore, the present officers will continue in office until December 31, 1938; Mr. Jackson as chairman, and D. E. Galloway, assistant superintendent telegraph, Canadian National, as vice-chairman.

The attention of the section was focused primarily

on the subjects covered in the papers presented by special speakers. A paper on "Communication Line Wire Joints" was presented by Hobart Mason, engineer of lines, and D. L. Baxter, engineer, of the Western Union Telegraph Company. Mr. Mason introduced the paper, emphasizing the importance of line-wire joints in communication circuits. Mr. Baxter described past, present, and experimental joints and their characteristics, particular emphasis being laid on rolled and compressed sleeve joints as representing the modern trend. Photomicrographs of the joints and photographs of the various joint tools were used to illustrate the presentation. The Western Union uses about 1,000,000 wire joints annually, and has about 80,000 of the new double-tube grip joints in service. Members of the section availed themselves of the opportunity to ask questions on the proper installation of such joints.

C. G. Sinclair, Jr., engineer, of the American Telephone & Telegraph Company, presented a paper on "Some Interesting Plant Problems," in which he reviewed current practices of that company and discussed stub reinforcing, line-wire sleeves, the application of tie-wires, increased span lengths, and gas-filled cables.

What may be designated as the high point of the convention was reached when J. A. Parrott, engineer of special service, of the American Telephone & Telegraph Company, presented a paper entitled, "Practical Applications of Telephone Repeaters and Carrier Telephone Systems." Carrier systems are frequently referred to as wire-guided radio, in that the sending and receiving

apparatus is similar to that used in radio, except that the energy to be transmitted is superimposed on and guided by existing line wires, which may continue to be used for regular telephone or telegraph circuits. Members of the section manifested much interest in this subject and kept Mr. Parrott busy answering the questions which they propounded. The point was emphasized that on the railroads the line circuits on which carrier systems are to be applied, are of necessity different in character from the lines of commercial companies.

On the last day of the convention the section heard a discussion on "The Transaction of Commercial Telegraph Business at Railroad Telegraph Offices" by C. E. Davies, assistant to vice-president of the Western Union Telegraph Company. Mr. Davies' discussed various methods of building up the volume of commercial business at these offices, and suggested that a study be made by the section in conjunction with representatives of the telegraph companies to this end.

The above-mentioned papers were interspersed among the reports of seven of the Telegraph & Telephone Section committees. During the presentation, by Committee I—Outside Plant, of a revised specification for the construction of wood pole lines, I. C. Forshee, of the Pennsylvania, discussed the trouble which had been experienced by various railroads with pot-headed cables during the Ohio River floods, and suggested that the section consider the use of sealed-in terminals. A. P. Linnell, of the Canadian National, asked that loading maps shown in this specification be revised to include Canada. Committee I also submitted revised or new specifications covering various types of cable, connectors, body belts, pole-line hardware, dynamite storage boxes, discussions of electrolysis and insulator development, and instructions for the transportation and storage of dynamite.

One of the interesting features of the report of Committee II—Inside Plant, was a specification for the installation and maintenance of selective equipment for the remote control of printing telegraph apparatus. Considerable attention was given to the discussion of the application and operation of such circuits. Another report of this committee, which was of particular interest, covered the service of dry cells and batteries and showed how the spontaneous shelf deterioration of dry cells of the ordinary No. 6 size for general purposes, occurring in six months, was reduced from 35 per cent in 1901 to 25 per cent in 1916, and to 7 per cent in 1934. The useful output of dry cells, measured by their service life on various tests, has been materially increased. Cells of the telephone type, made in 1910, according to the report, gave 155 days of service on the light intermittent test; those made in 1916 gave 165 days, and the output was increased in 1926 to 230 days. Early in the present decade, special grades of telephone cells became available that had a service life of 360 days, and some cells made in 1934 gave a life of 450 days.

Committee III—Communication Transmission, submitted for discussion a routine for maintaining a-c. operated dispatching circuit telephone repeaters, and presented as information tables showing attenuation of line facilities at carrier frequencies. Values were given for attenuation in db per mile in dry and wet weather from 4,000 to 11,000 cycles for open wire, and for load and non-load quadded cable pairs. A second table gave the loss in short lengths of cable. During the discussion, W. M. Capen, of the International Telephone & Telegraph Company, explained an installation of carrier systems which has been in service on the Argentine State Railways for one year.

Committee IV—Research and Development, reported

on portable crosstalk meters, dispatcher transmitters with arm or bracket mountings, and high-speed composite equipment for use in connection with printer circuits, and presented for discussion a requirement specification for amplifiers and loud speakers for use on railroad telephone dispatching circuits. A report on the train-communication system of the Union Switch & Signal Company was withheld until operating results can be incorporated. However, this committee did present interesting reports on the application of radio to harbor craft operation, point-to-point communication by the use of ultra-high frequency, and emergency radio communication. For example, the Lorain Telephone Company, Lorain, Ohio, has established a two-way telephonic radio communication service for the Great Lakes Carrier Association. This service has been developed for the purpose of providing dependable two-way communication between boats operating on the Great Lakes and between these boats and the general public.

RCA has placed in service an ultra short wave radio circuit between New York and Philadelphia, Pa. This circuit provides for the transmission in both directions simultaneously of two facsimile pictures, and also provides in both directions two automatic typewriter channels and a telegraph channel. It was noted that the Western Union Telegraph Company is developing portable radio equipment for use in emergencies. The Federal Communications Commission has set aside for general emergency use two frequencies, known as "Special Emergency Frequencies," 2,726 k.c. for telephonic communication, and 3,190 k.c. for telegraphic communication. The committee stated that the radio amateurs furnished a most noteworthy and exceptional service during the flood emergencies of the past year. Also placed before the section was a brief description of the H, G, and C carrier systems and carrier transportation systems of the American Telephone and Telegraph Company.

The committee presented a statement of general principles governing the transmission of frequency bands, energy levels and transpositions which would insure satisfactory co-ordination of carrier systems on the same pole line. With regard to direction of transmission of frequency bands, the following recommendations were made. Tentatively, the 7 to 17 k.c. band will be used for the direction of transmission from north to south of east to west, and the 4 to 7 and 17 to 30 k.c. bands will be used for the direction of transmission from south to north or west to east. These are the practices commonly followed for carrier telephone systems.

Committee VI—Communication Plant Operation, recommended a revision of the sections of the manual covering the method of preparing and maintaining private branch exchange telephone directories, and routine for handling telegrams by telephone. The committee also suggested that the handling of telegrams on printers would be expedited by showing number and office call only and recording the time of transmission every 15 minutes. The value of the use of reperforators in railroad printer telegram service was also discussed, reference being made in this discussion to the methods of the Missouri Pacific. (See *Railway Age*, August 21, 1937, page 239.)

The Committee on New Devices and Materials presented a very interesting report on 33 of the latest developments in the new device and material field. One of the most interesting presentations at the meeting was the material presented by Committee No. 7 on inductive co-ordination. Two additional sections for inclusion in the discussion of fundamental factors involved in inductive co-ordination and of remedial measures applicable under various conditions were submitted.

Communications and Books . . .

A "Fan" Finds Passenger Service Far from Perfect

TROY, N. Y.

TO THE EDITOR:

I am an art teacher in a local high school, where I have done my best to stimulate interest in rail travel for the past seven years. My students have been inspired to do their finest work on the subject of rail travel. They have designed time table covers, posters, advertisements, match cases, etc., as class problems. Boys meet with me on week-ends and holidays to take pictures along the right-of-way. Certainly this interest will have its carry-over when these folks mature.

Personally I have always loved the railroad and since I have been teaching I take an extensive trip West by rail each summer. After traveling through the Pacific Northwest this year, I am at last ready to drive my car another summer, and why? To see the railroads.

This may seem strange, but as a passenger on a train one is treated in strict accordance with the rule book definition of a passenger and he must ride even as a steer in a cattle car. He walks through the gates to get on the train and he should stay in a seat throughout the trip and leave through the gates, without varying the usual procedure. Employees have no patience with the man who would stray from the flock, even long enough to walk up ahead and look at the power.

Passengers' Freedom Needlessly Restricted

Most trains do not have observation cars, even second sections of advertised trains do not. One cannot see a railroad from a side window. Yet it is impossible to ride on a rear platform, even for a few minutes, without being ordered off by a so-called efficient brakeman, or else jeopardizing the job of a friendly brakeman. Certainly the rear vestibule of a steel car is much safer than any open observation platform in use. The gate is so high that a man could not be thrown over it, yet a rule is allowed to exist which takes this pleasure from a customer who pays well for the privilege.

I tried all forms of service to see if one might see more of the railroad and surrounding country on one than the other. Stop fooling the public with this reduced rate propaganda. My circle tour cost as much as it did before rates were reduced at all. Tourist sleepers are undesirable travel. Day coach chair cars are so overcrowded as to offend more than they please. The average train carries one air-conditioned reclining chair car to four old-type day coaches. Then too—any man who pays fare for a hundred miles or more is deserving of a seat to himself, without sitting next to a stranger. The only comfortable way to travel is first-class Pullman and even that is uncomfortable if the train does not carry an observation car. Incidentally porters should be paid a living wage and the tipping nuisance abolished by rule.

Even in beautiful summer weather most trains run late anywhere from 5 minutes to 1 hour. (The only service in the West which is kept on time is streamlined service.) Employees are so anxious to keep people imprisoned in cars that they evade questions about water stops, etc., and give inaccurate information. If a train is scheduled to make a 10-minute stop and they are running 20 minutes late the passenger is told that he can not get off. He sits restless in his seat while the train delays 15 minutes or more and misses all manner of opportunity to get pictures or to see the station.

They Hide Their Trains at St. Louis

Any tramp can get into a station and ride the first or second "blind" without being stopped, but the respectable looking traveler is halted at the gate every time, if he wishes to look over the station layout. The daily railroad "pageant" is at its peak in the St. Louis station, with trains from a dozen different roads always standing ready to leave for varied destinations. Yet there after traveling across the country and half way back again, I was stopped by an "efficient" gateman and refused the pleasure of walking on the platforms to see the great fleet of crack trains

lined up there. If you consider this good publicity or railroad friendship I disagree. Remember at all times the railroad is putting on a "show" for the people, as has been so vividly brought out by such men as Robert Henry in modern books on the subject. When you hold your audience back and keep them from being thrilled by your pageant you do not make friends.

Naturally a "fan" who has been close to the railroad all his life feels a certain partnership with the railroad itself. He probably knows more about the railroad and *safety* than the employees who are of a mentality which keeps them in the same rut all their lives.

A "fan" must feel free, he must be granted privileges which some kindly old lady, traveling on a train, does not want. Employees should be intelligent enough to sense this quality in an individual and treat him as this type of customer should be treated.

Go by Auto to See the Railroads

The best solution is to drive your own car, stop along the right-of-way whenever you want to, take pictures, stop at the stations, sneak by the gatemen (the anti-railroad publicity agents) and you will see more of the railroad while it lasts than if you ride on it. I've done my best for several years to pay for my share of this delightful romance called railroading but I was much happier when as a boy I "found a shrine of real companionship beside a railroad track." As a customer of the railroads I have been disillusioned. The average grocery store clerk is ten times more tactful in his relations with customers than the best railroad men.

The final blow comes when you get on to a train on one of the roads out of New York. The coaches are *crowded*, women have to sit with strange, rough-looking men, there is one seat left beside a stout woman. The conductor tells you you must "take it." Behind you on the rear end of the train, where you as a "fan" would gladly ride standing up, is a dead-head coach, lights dark, rear brakeman and one dead-head employee sleeping in the last eight seats opened double. Truly it costs the railroad a lot more than coal to carry this dead-head. Do you never consider the comfort and personality of your customers?

Suggestion—The American Railroad Association might issue "fan" cards which would give "fans" equal privileges with employees, so that they might ride with the same freedom and comfort and get some fun out of rail travel even as the men do who ride on passes.

RAYMOND C. HENRY.

New Book

Signal Section, Association of American Railroads; Proceedings Vol. XXXIV. 690 pages, 9 in. x 6 in. Cloth binding. R. H. C. Balliet, secretary, 30 Vesey St., New York, N. Y. Price, \$8; to members of the Signal Section, \$4.

This volume comprises the reports of the 10 standing committees and the discussions that followed their presentation at the annual convention held in Chicago in March.

A wide variety of subjects dealing with technical developments, new standards and drawings applicable to the signaling field were covered in these reports. One report of general interest to railway officers was devoted to the economics of railway signaling, dealing with such items as the costs involved in stopping trains, operation with a reduced number of main tracks, costs of maintenance and operation of centralized traffic control and automatic block signals, method of forecasting and proving the economic value of signaling, train operation by signal indication without train orders for normal operation, and freight train time savings where trains are operated by signal indication. In addition to reports on the items mentioned, an extended paper by B. J. Schwendt, assistant signal engineer, New York Central, on The Economic Relation Between Signals, Track Arrangement, Motive Power and Method of Operation is included.

NEWS

Railroads Need Advance in Rates

This is only solution, says Samuel O. Dunn, for problem now confronting them

"That the nation is confronted again with one of those serious railway crises which occur periodically with increasing frequency is a fact, the great significance of which the public should not fail to realize," said Samuel O. Dunn, chairman of the Simmons-Boardman Publishing Corporation and editor of *Railway Age*, in an address before the Treasury division of the Association of American Railroads at New Orleans, La., on October 14.

"The present crisis is so significant because it is occurring five years after the real bottom of the Great Depression, and when railway freight traffic is 50 per cent larger than it was at its lowest level. The reality of the crisis is demonstrated by the fact that, as a resultant of all the recent adverse influences, the net operating income of the railway industry is now on a lower annual basis than in any year of the depression excepting 1932.

"A careful estimate based on all the statistics available indicates that the wage advance to train and enginemen put into effect on October 1 reduced net operating income to an annual basis of about \$430,000,000, or 1.66 per cent on property investment. On this basis it would be about \$100,000,000 less than is required to pay annual fixed charges. The return earned in 1930 was 3.3 per cent; in 1931, 2 per cent; in 1932, 1.25 per cent; in 1933, 1.83 per cent; in 1934, 1.79 per cent; in 1935, 1.94 per cent; in 1936, 2.59 per cent, and in the first eight months of 1937, 2.56 per cent.

"Why do the railways periodically have these crises while other industries do not? Many other large industries recently have made advances in the wages of their employees and have sustained increases in the prices and taxes that they must pay. But while these other industries have been constantly advancing their prices since the bottom of the depression, the average revenue per ton per mile of the railways has continued declining until it is now only 9.36 mills—the lowest for nineteen years or since 1918. The advance in the average wholesale price of all commodities since the bottom of the depression in 1932 has been 36½ per cent. The decline in average railway revenue per ton mile since 1932 has been 10½ per cent. The railways

undoubtedly, like other industries, would have advanced their rates concurrently with the increases in their costs if they had been free to do so; but they cannot advance them without authorization by the Interstate Commerce Commission, and the Commission actually has reduced them even within recent years of rapidly increasing costs.

"The railways are having to bear their share of the burden of the increases in prices and taxes that have occurred since the bottom of the depression, and especially within the last two years. On the basis of the purchases of equipment, materials and fuel actually made by them in 1936, the advances in the prices they must pay have during the last year added about \$125,000,000 annually to their operating expenses. Their taxes have been largely increased, especially by railroad retirement and social security legislation. Recently they have granted advances in the wages of their employees averaging about 7½ per cent and that will cost about \$135,000,000 annually.

"An increase of almost 16 per cent in their freight business in the first five months of this year enabled them during these months to increase their net operating income in spite of the increases of their costs that already had occurred. But deceleration since then of the increase in their traffic until it is now hardly any larger than in 1936, and the recent advances in the wages of their employees have radically changed their situation.

The public cannot afford to have the situation created by the adverse influences mentioned continue long. It would make railway companies now in bankruptcy stay in bankruptcy. It would force others into bankruptcy. It would cause drastic reductions of railway employment and buying. There is need for the railways largely to increase their buying, both to continue enlargement and improvement of their service, and to contribute to general business recovery. Railway buying of equipment, materials and fuel increased from about \$450,000,000 annually in the worst depression years to \$1,041,200,000 in 1936. It increased further from \$545,211,000 in the first seven months of 1936 to \$715,000,000 in the first seven months of 1937. But railway buying is principally determined by the amount of net operating income earned, and recently has been sharply declining. It increased 74 per cent in the first quarter of 1937 and only 8 per cent within the next four months. Although complete figures for later months are not available, it undoubtedly has since continued to decline and can be adequately revived only by a

(Continued on page 544)

Board Estimates Carloading Rise

Gormley and Col. Barber address Atlantic shippers; car types discussed

An 11.4 per cent increase in carloadings for the fourth quarter of this year as compared with the corresponding period of 1936 was the conservative estimate for the territory within its jurisdiction issued by the Atlantic States Shippers' Advisory Board at its 44th regular meeting in the Hotel Robert Treat, Newark, N. J., October 6 and 7, representing shippers and railroads in the trade centers of New York, New Jersey, Maryland, Delaware, Virginia, and eastern Pennsylvania. This figure was ascertained on the basis of reports delivered by 40 commodity committees, which estimated that the number and kind of cars required through October, November and December would total 701,287, as compared with a record of 629,701 carloads shipped during the identical period of last year.

Speaking on "Possible Legislative Interference with Efficient and Economical Operation of Railroads," M. J. Gormley, executive assistant to the president, Association of American Railroads, argued before the members of the board at the October 7 session that there is no justification for the train-limit bill now pending, expressing the fear that the bill, in its consideration by the House of Representatives, will be treated from a political standpoint. Mr. Gormley not only voiced opposition to the bill limiting train lengths to 70 cars, but also pleaded for strong action against the counter proposal that the power to regulate the length of trains be delegated to the Interstate Commerce Commission, asserting that "the railroads now have all the regulation they can stand and Congress should not interfere with a managerial function of this kind by the passage of a law or by delegation of power to the Commission."

Included in the speaker's recital of objections to the train-limit bill was a reference to the relationship of adequate train loads to the economies to be gained from consolidation. On this point Mr. Gormley asserted: "It is well recognized that eventually must come about further consolidation of railroads in the interest of reduction in transportation costs, if for no other reason. The principal reduction that can be made in transportation costs is the con-

(Continued on page 544)

B. & O. Sponsors Educational Trip

460 New Yorkers see modern and ancient rolling-stock at road's birthplace

Over 460 New York railroad fans made a 356-mile round-trip tour over the Baltimore & Ohio on October 10 to view the road's modern and historical facilities in Baltimore, Md. Upon arrival at the historic Bailey's roundhouse of the road, the excursionists were privileged to watch the operation, under steam, of a full-sized

the B. & O., a copy of the "Baltimore & Ohio Magazine," a detailed discussion of the 16-cylinder engine, and several other pamphlets dealing with general railroad subjects.

The excursion train was hauled both ways by the "George H. Emerson."

New Jersey Intra-State Rates

The Interstate Commerce Commission has found that New Jersey intra-state car-load rates on whiting, prescribed by that state's Board of Public Utility Commissioners, do not result in undue or unreasonable preference or prejudice as between persons or localities in intra-state commerce, on the one hand, and interstate com-

Would Restore '06 Regulatory Set-up

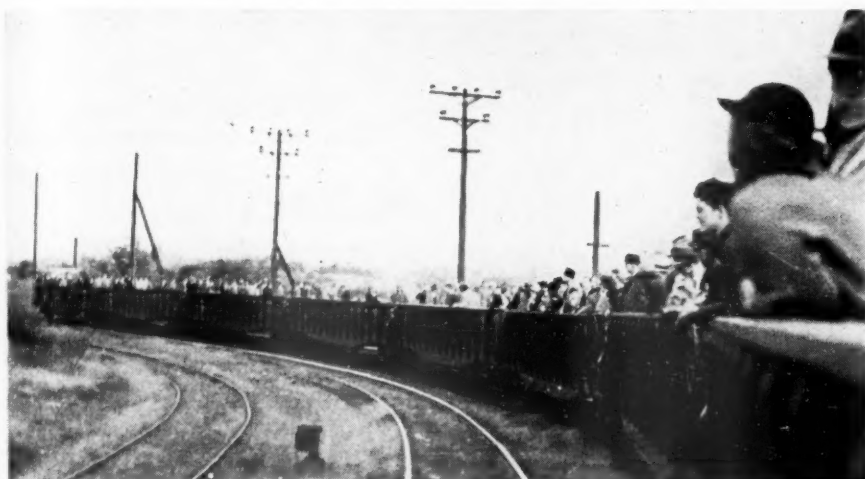
Subsequent enactments, save control of securities, unwise says Fletcher

Asserting that "with the possible exception of security regulation, we have not wisely served the public interest by the adoption of all the regulating and restrictive measures that have come into the law since the adoption of the 1906 amendments" to the Interstate Commerce Act, Judge R. V. Fletcher, vice-president and general counsel of the Association of American Railroads, this week reiterated before the Transportation section of the Illinois Chamber of Commerce his previously-expressed belief that "we would help the situation immensely if we would go back to the comparatively simple system of regulation" which those 1906 amendments rounded out. Judge Fletcher spoke at the Transportation section's October 14 luncheon which was part of the Illinois Chamber's annual meeting program.

Referring to a previous occasion when he advocated the foregoing "with somewhat less emphasis" Judge Fletcher recalled that he had then been told that he was engaged "in a vain crusade" since "You can not turn back the clock of progress." While granting the truth of the latter he challenges its application to the matter in hand. He is not seeking "to cancel or impair true progress"—it is rather his conception that "real progress is in the direction of a policy that, while giving due regard to the right of the public to reasonable and non-discriminatory rates, will leave the agencies of transportation free to work out the problems of service along lines that are in harmony with the facts of life, the lessons of experience and the mandates of economic law."

And it is Judge Fletcher's view that the 1906 amendments, which, "in the estimation of the reformers of that period," made the legislative program complete, gave to the act about all it needed to attain these desired ends. Railroads were required to publish and adhere to their tariffs of rates; the Interstate Commerce Commission, upon complaint, could prescribe maximum reasonable rates, and award reparation; the commission had ample authority to correct discriminations, and rebates and secret concessions were impossible. "Surely," said Judge Fletcher, "here was useful regulation carried to the very limit of practicality."

At the outset of his address the A.A.R. general counsel, who emphasized that the views expressed were his own and not those of the A.A.R., noted "gloomy aspects" of the railroad situation, such as the mounting costs of labor and materials and "a manifest reluctance on the part of the rate making authorities to respond to the appeal for sufficient revenue to meet these rising costs." He found, however, that "by way of compensating factors there may be mentioned a decided quickening of interest in the public mind in the problems of the transportation agencies and a



B. & O. Excursionists Ride "No-Door Pullman" Through Baltimore, Md.

replica of the "Tom Thumb," original locomotive of the road built in 1829, a replica of the "Atlantic," a "grasshopper" type built originally in 1832, the original "William Galloway" constructed in 1837, and the actual "William Mason" built in 1856. The ancient motive power representatives were shuttled back and forth over a side-track, dragging appropriate cars behind them, much to the delight of the spectators. The Pangborn collection of wooden models of other historic locomotives housed in Bailey's Roundhouse was also thrown open for inspection.

The fans were then loaded into open gondola cars (properly cleaned out, of course) and rode through the manufacturing district of the city to the Riverside roundhouse, where the present-day motive power of the road is located. Here a representative of each class of B. & O. engine available was spotted for the enjoyment of the picture enthusiasts. Another blow of the whistle, and the crowd returned to the "bums' Pullmans" for a longer ride to the historic Mt. Clare shops. Here they inspected the Mt. Clare station, said to be the oldest railroad terminal in the country.

On the return journey, representatives of the road distributed envelopes containing 9½ in. by 3½ in. photographs of the 4-4-4 type "George H. Emerson" and of an artist's conception of the 16-cylinder constant torque locomotive now under design by the road. There were also enclosed a short history of the road, a letter of welcome by Dan Willard, president of

merce, on the other, or in unjust discrimination against interstate commerce.

Commissioner Mahaffie wrote the majority report in the case wherein the commission's investigation was instituted upon petition of New Jersey railroads. Commissioner Caskie's concurrence is noted, but Commissioner Miller wrote a brief concurring opinion, revealing that his study of the case left him with the impression that the scale required by the New Jersey board "is too low and probably results in the preference and prejudice complained of." He adds, however, that "In the absence of a definite showing of record to that effect, which it seems to me might well have been made by the introduction of cost figures, I feel obligated to concur in the majority finding."

Greyhound Strike Postponed

A strike order which would have affected 1,200 bus drivers and halted the operation of eight Greyhound bus lines was withdrawn late on October 13 for an indefinite period by the Brotherhood of Railroad Trainmen. Postponement of the strike will permit the resumption at Cleveland, Ohio, on Monday, October 18, of negotiations between the representatives of the Greyhound lines and the brotherhood. According to D. J. McGrath, general counsel for the brotherhood, the strike order was suspended at the request of the employers to enable them to attend the convention of the National Association of Motor Bus Operators at Chicago.

manifest improvement in the relations that prevail with patrons and employees alike."

Next came Judge Fletcher's brief resume of regulatory developments through the 1906 amendments, after which he examines and finds wanting all of the major changes in the regulatory law since that time, save only those relating to control over security issues. The commission's power to suspend proposed rates which came in 1910 has cost the railroads sums of money "impossible to calculate," whereas if the suspension power had not been granted no injustice would result, as reparation could be awarded retroactively in connection with any rate published and subsequently found unreasonable. Of the same general type as the suspension power "is that other innovation which gives perpetual life to a commission order until it is set aside or modified;" prior to 1906, and for a time thereafter, an order fixing rates was operative for only two years.

Judge Fletcher called upon the Ex Parte 115 procedure for an illustration of the latter. "In the recent Ex Parte 115 case, in which some advances in rates were proposed," he said, "the tariffs as to most important commodities could not even be filed until service could be had upon all the representatives of all the shipping interests taking any part in any one of the innumerable cases that affected any one of the commodities involved. The petitions dealing with the final phase of the case contained 128 pages of closely printed matter, devoted to naming the cases, and, in order to make sure that no one had been omitted, it was finally found necessary to serve the petition upon every member of the commission bar and others, 10,000 in number. The record in this case comprises more than 7,000 pages; the exhibits were 402 in number. Altogether, more than 3,000 pages of briefs have been filed and oral arguments has consumed five days. The commission, after the case was first submitted, considered it 74 days before authorizing the surcharges; on the application for an extension of the surcharges, the commission pondered the subject for 15 days; on the final application for permanent advances in a selected group of important heavy commodities, the commission has already deliberated for 115 days. All of this time was used in deciding whether the railroads should be allowed to pass on to the consumer some part of the added expense of operation, due to increases in the wage scale and the cost of materials. Recently in England, the Railway Rates Tribunal received an application from the railroads to advance all rates and charges 5 per cent, a greater advance than was suggested in Ex Parte 115. From the beginning of the hearings until the tribunal decided the case, there was a lapse of 17 days, and many of the English papers were critical of the tribunal for such a long and unnecessary delay. What a contrast in methods does this comparison suggest!"

Then there is the 1910 amendment which eliminated from the long-and-short-haul clause the words "under similar circumstances and conditions"—an "unfortunate departure from sound rate making principles . . . that has caused immense damage, not only to the railroads but to the interior sections of the country, wherever

located"; the valuation act, costing the railroads \$154,000,000 and the government \$48,000,000, which brought "thousands of theories and theorists" into being, and produced such a record that if all about one item alone—track laying and surfacing—were to be printed there would result a volume 10 times as large as "Gone with the Wind"—"in this case a most suggestive title." Closely related to "all this valuation nonsense" was "the late lamented recapture clause" which "outrode storms of litigation that bore down upon it, only to perish by reason of its essential economic unsoundness."

Another "noble experiment" was the Emergency Transportation Act of 1933, under which, "despite the sincere efforts of the very able federal co-ordinator of transportation" accomplished "nothing of real value," save "a number of worthwhile studies and reports." Also, in the "category of unfruitful legislative theories," Judge Fletcher places the Transportation Act of 1920's "elaborate plan for the consolidation of the railroads," which "has had no real effect except to restrict and hamper voluntary consolidations, which would normally have taken place as the result of ordinary economic developments." Without taking sides in the holding company controversy the speaker thought it "safe to say" that "the most conspicuous of these holding companies resulted from an effort to effect consolidations along lines which were not always in accord with the artificial plans which the statute required the commission to enforce."

As to section 77 of the bankruptcy act, Judge Fletcher expressed a sincere hope that this is not to be classed "among those obsolete and disappointing statutes, that have either been repealed or have fallen into desuetude." This law, he adds, "was conceived, written and rewritten in an honest effort to simplify the reorganization of railroads unable to make headway under existing conditions."

Judge Fletcher next disputes the contention that "modern legislation has been helpful in controlling the supply of transportation." He is not sure that anything of substantial value has been accomplished by the requirements that certificates must be obtained for extensions and abandonments. With respect to the latter, he explains, no railroad desires to abandon a line while there is reasonable hope of prospective profits, and few proposed abandonments have been denied. And little new construction has been proposed except the building of auxiliary lines.

In confessing that "the regulation of security issues may have proven helpful, particularly as an aid to credit" Judge Fletcher notes that "here the problem is not one peculiar to the transportation industry, as the history of the Security and Exchange Act clearly demonstrates."

One argument in favor of his suggestion that regulation be restored to the 1906 setup the A.A.R. general counsel considers "particularly important." He goes on to explain that it would facilitate the development of an equitable situation wherein all agencies would be subject to equal regulation, effectively meeting in this connection the difficulty of bringing such equality at present by applying to small highway and

waterway operators "all the ponderous and cumbersome regulating machinery that applies to railroads."

Model Builders to Meet in Los Angeles

On November 13, 14 and 15 a convention and exhibit of railroad model builders is to be held in the Southern California Gas Building, Los Angeles, Cal.

"Jim Crow" Law Upheld in Mississippi

Mississippi's "Jim Crow" law, requiring the segregation of races on trains and buses, was upheld by the Mississippi supreme court on October 4 in a civil suit in which a negro woman contested the law following assault for refusing to give up a seat on a public bus reserved for a white person.

Peabody Chosen Supply Association Vice-President

R. T. Peabody of the Air Reduction Sales Company, New York, was elected Sixth vice-president of the Allied Railway Supply Association, Inc., at its recent meeting in the Hotel Sherman, Chicago. This fact was inadvertently omitted from the report of the election published in the *Railway Age* of October 9, page 498.

Southwestern Car Service Association to Meet

The regular fall meeting of the Southwestern Car Service Association will convene on October 28 and 29 at the Hotel Adolphus, Dallas, Tex. The list of subjects to be considered include penalties for damage to high-class box cars, resulting from misuse; arch bar trucks; special-type equipment; and office methods and accounting. Committee reports on these subjects will also be presented.

Railway Express Agency Reports 44th Consecutive Monthly Gain

The Railway Express Agency handled 10,630,430 shipments during the month of August, an increase of 619,742 shipments, or 6.19 per cent, over the corresponding period of last year, marking the 44th consecutive month in express gains in the number of shipments carried. Officers of the agency attributed the August increase in great measure to the growth of consumer income in the agricultural districts of the midwest and south.

Mid-West Board Meeting

An increase of 3.5 per cent in carloadings during the fourth quarter of 1937 for the territory of the Mid-West Shippers Advisory Board was forecast at the 43rd regular meeting at Evansville, Ind., on October 7. A considerable portion of the discussion of transportation conditions was devoted to the open-top car situation. A heavy movement of coal is anticipated and carriers were urged to give attention to the repair of this type of equipment preparatory to the movement of coal.

At the annual dinner of the Evansville Transportation Club, which was advanced to coincide with the meeting of the advisory board, J. P. Haynes, executive vice-

president of the Chicago Association of Commerce, spoke on "Do Shippers Want One Unified System of Rail Transportation?" He outlined the disadvantages of a single system, contending that consolidation of the railways will develop into a single system for all forms of transportation. An abstract of his address appears elsewhere in this issue.

Southern Governors Freight Rate Petition

The Interstate Commerce Commission has postponed the hearing which was scheduled for November 10 at Birmingham, Ala., on the application of Southern states for a readjustment of freight rates in that territory. A new date will be announced later.

Intervenors in this case thus far include the Baltimore Association of Commerce, the Cleveland Chamber of Commerce, the Manufacturers Association of Connecticut, and the State of Indiana.

"Marquette" Selected as Name for Milwaukee Train

"Marquette" is the name selected in a contest as the name for the high-speed train placed in service by the Chicago, Milwaukee, St. Paul & Pacific between Mason City, Iowa, and Chicago on August 8. During the first two weeks the train was in service, special postcards for suggestions were distributed by trainmen and of the hundreds of names submitted Marquette, suggested by four passengers who will share the \$200 prize, was selected as the most appropriate.

Rock Island to Improve "Apache" Service

Effective December 15, the Chicago, Rock Island & Pacific will inaugurate improvements in its "Apache," which operates between Chicago and California. Under the new program this train will carry a three-compartment, two-drawing room enclosed lounge car, Chicago to Los Angeles; also a ten-section, two-compartment, one-drawing room sleeping car. An all-room car will be operated at least three times a week to Palm Springs, Cal. A new dining car will be assigned to this train, which will also carry de luxe chair cars and tourist sleepers.

Oil Company Can Drill on Right-of-Way

In a suit in which the Kansas City Southern sought to prevent the Marietta Oil Corporation from drilling on a 100-ft. strip of land along its right-of-way in Rodessa, La., the federal district court at Monroe recently ruled that the railroad does not own fee to the strip and cannot therefore interfere with the drilling of an oil well by the Marietta Oil Corporation. The railroad sought to enjoin the oil company from trespassing upon and interfering with its possession of the strip, which lies 50 ft. on each side of the carrier's main track. The court held groundless the railroad's contention that drilling in such close proximity to its operations would not be safe. The oil company, however, was enjoined from interfering with the railroad's

right to erect warehouses and platforms abutting the site of the proposed drilling operations. The court also ruled that there should be judgment for the railway company in dismissing the oil firm's counter suit to stop the railroad from building.

Acme Status Case Reopened

The Interstate Commerce Commission has reopened and assigned for oral argument at Washington, D. C., on November 11 the case wherein it decided last July that Acme Fast Freight, Inc., one of the large freight forwarding companies, was subject to federal regulation as a broker with respect to all of its interstate activities save those involving the actual operation of motor vehicles. In the latter connection the commission held that two Acme affiliates are motor carriers within the meaning of the Motor Carrier Act, a status which Acme had sought for itself and all of its operations.

The commission's decision to hear further argument in the case follows the filing of Acme's petition for rehearing, and that of the National Carloading Corporation and the Texas Package Car Company, intervenors, for reconsideration and oral argument.

Switching Rates at Chicago

The Interstate Commerce Commission, in its ninth supplemental report in No. 19610, Switching Rates in Chicago Switching District, has further modified prior orders so as to permit the establishment and maintenance, until September 30, 1938, of interstate and intrastate rates on sand, gravel, crushed stone, and slag, in carloads, minimum 100,000 lb., within the Chicago switching district, of 40 cents per net ton for one-line hauls between points on the Baltimore & Ohio and 50 cents per net ton for two-line hauls to points on the Baltimore & Ohio from points on the Baltimore & Ohio Chicago Terminal and Indiana Harbor Belt.

Enthusiasts to Meet

The theme of the next meeting of the Railroad Enthusiasts, Inc., New York division, on October 22, in room 2726, Grand Central terminal, New York, will be "Passenger Sales Promotion." Skits written and acted by members of the organization will be presented, making reference to railroad contacts with the public. A group of passenger officers representing railroads entering New York will be present and some of its members will speak on the subject "Railroad Fans from a Railroad Viewpoint."

It is announced that B. K. Martin is to assume the chairmanship of the organization, succeeding Franklin Snow.

Number of Illegal Train Riders Declines

The number of illegal train riders and other trespassers ejected from railroad property but not arrested in the six months' period from March to August, inclusive, this year, was approximately 80,000 below the same period in 1936, according to reports received from 80 of the principal railroads of this country by the Pro-

tection Section of the Association of American Railroads. Illegal train riders and other trespassers removed from trains, prevented from getting on trains, or ejected from railroad premises, but not arrested in the six months' period this year totaled 2,172,763 as compared with 2,251,663 in the same period last year. Except for May and July, reductions in the number of such trespassers were reported in each of the months this year compared with the same month one year ago. The greatest number of illegal train riders and other trespassers ejected from railroad property in any month included in the six months covered by the reports was in July, this year, when there were 463,181. In the four months' period which included March, April, May and June of 1937, 888 trespassers lost their lives and 937 were injured, compared with 916 killed and 951 injured in the same months of 1936.

"Rocket" Tour Draws Crowd

A total of 229,581 persons passed through three of the streamlined "Rocket" trains of the Chicago, Rock Island & Pacific, while on a tour of 55 towns and 11 states which began on August 7 in St. Paul, Minn. At some towns almost the entire population turned out en masse to greet one of the trains. At Burlington, Col., 1,113 persons of the total population of 1,280 passed through the cars, while at Smith Center, Kan., 1,157 of the total population of 1,736 persons visited the train. At Des Moines, Iowa, with a population of 142,559, the train attendance was 20,884 in two days, while at Peoria, Ill., with a population of 104,969, the attendance was 11,218 on one day.

Reopens Case on Storedoor Service by P. R. R. Affiliate

Further argument on the status of Scott Brothers, Inc., trucking affiliate of the Pennsylvania, in its role as P. R. R. and Long Island collection and delivery agent at New York, will be held before the Interstate Commerce Commission at Washington, D. C., on November 12, the commission having reopened the case in which it decided last June that the operations involved brought Scott Brothers under the Motor Carrier Act as a contract carrier. Petitions for reargument and reconsideration were filed by the Cartage Exchange of Chicago, the Merchant Truckmen's Bureau of New York and a group of Western railroads.

Commodities Withdrawn from Ex Parte 115

The Interstate Commerce Commission this week rendered decisions on proposed increases in rates on two commodities which had been withdrawn from the general Ex Parte 115 case, authorizing increased carload rates on various insecticides and fungicides (except calcium arsenate and liquid agricultural insecticides and fungicides) within and between southwestern and western trunk line territories, from official to western trunk line territory, and between southwestern territory and southwestern and official territories. In the other case the commission found not justified

proposed increases in carload rates on moss, not otherwise indexed by name, and palm and palmetto fibre from southern and southwestern territories to points throughout the United States.

New Haven to Run Farm Excursion

An opportunity to re-live the enjoyments of farm life is the latest offering of the New York, New Haven & Hartford passenger department to the residents of New York and vicinity. On the mid-afternoon of Saturday, October 23, a special train will carry the would-be agrarians to Kent, Conn., where they will enjoy a typical harvest supper prepared by a committee of local women. The remainder of the program will include a regular old-fashioned husking bee under competent instruction and a rural barn dance with square dancing "n'everythin'."

The return trip to the city will be made on Sunday at 12:15 a. m.

Shareholders Offer Plan For New Haven

A committee of shareholders of the Old Colony have submitted to the Interstate Commerce Commission a plan of reorganization for that road which would provide for its operation independently of the New York, New Haven & Hartford. The plan also provides that in the case it is not thought feasible to operate the road independently, it might be sold to the New Haven if the Old Colony shareholders receive a "fair" share of the New Haven's securities.

The plan, which is based upon a study by Joseph L. White, special adviser to the committee, would have the Old Colony establish fast freight ferries between Newport, R. I., and New York to connect with Western and Southern trunk-line railroads. The Old Colony would offer to rent to the New Haven the use of tracks and terminal facilities between Boston and Providence.

The outline, which accompanies the plan, contains estimates of income for the road as an independent property. It is estimated that the total revenue would be \$19,664,000. The members of the protective committee are Francis R. Hart, William Dexter, George Peabody Gardner, Jr. and Alexander Whiteside of Boston and E. Sheldon Stewart and Eugene S. Taliaferro of New York.

Jeffers Supports Labor Measures in College Talk

"Business administration has a trinity of responsibility," declared W. M. Jeffers, recently-elected president of the Union Pacific, in an address at the Lancaster, Pa., celebration of the sequi-centennial of Franklin & Marshall College on October 14. "That responsibility is to three groups—the public, its workers and the investors, and that administration which nicely balances these responsibilities is the successful administration."

In treatment of business' responsibility toward its workers, Mr. Jeffers expressed himself thus:

"I believe in organized labor as we know it on the Union Pacific railroad,

where we have working agreements with all the national labor unions. In my dealings in many capacities with representatives of organized labor, we have always been able to work out our differences across the table. It is merely a question of worker meeting worker on a fair, open and above-board basis." He also subscribed to the enactment of protective measures for employees by both the state and the individual business organizations, asserting that "anything that tends toward the serenity of the worker is a good thing, not only for him but for the enterprise and the public which he serves. Labor organizations under the leadership of men of vision are an asset to industry."

Fire Association to Meet at Cleveland

The Railway Fire Protection Association will hold its annual meeting at the Hotel Cleveland, Cleveland, Ohio, on October 19 and 20. A tentative program for the meeting is as follows:

Addresses by president and by the mayor of Cleveland
Reports of Annual Meeting Committee, secretary-treasurer, auditor and Statistical committee

Address by chief of Cleveland fire department
Papers or informal talks on:
Pumps, valves and tanks from inspector's viewpoint

Watch service education
Personal factor in fire prevention
Use of correct nozzles
Inspection of sprinkler installations
Demonstration of common hazards
"Section meeting"

An "off the record" opportunity for inspectors to exchange experiences and ask aid in personal problems

Round table discussions on:
Locomotive fire kindlers
Fire brigades
Vegetable and fruit packing sheds
Storage of equipment
Air conditioning
Protection for airplanes and hangars
Liquefied petroleum gas
Protection for Diesel motors
Storage of freight
Salvage

Report of committees on:
Snow melting
Shop plants
Handbook

Merchandise in transit
Fire prevention week activities
Reports of accomplishments in co-ordination with other organizations
Report of Nominating Committee
Election of officers

Additional features are under consideration.

Third Stage of New York's West Side Improvement Opened

A ceremony held at the new 79th street crossing of the New York Central's West Side freight line in the city of New York, on October 12, completed the third stage in the road's program to remove its tracks from the streets below 64th street and to bury its tracks below a blanket of grass and trees for the beautification of Riverside Drive from 72nd street north to 124th street. The completion of this project brings to a close an era of railroad domination of the scene on the west side of Manhattan island since the completion of the Hudson River railroad in 1851.

The work just completed comprises the covering of the multiple-track railroad right-of-way for about 2½ miles under a framework of steel, on which rests a four-lane super-highway for a part of the distance and a landscaping development for

the remainder. Near the northerly end of the project a complete landscaping unit is carried over approximately 6,900 ft. of the line on a framework of rigid-steel construction. The work was sponsored jointly by the Department of Parks of the city of New York and the New York Central. The grade crossing elimination at 79th street was under the jurisdiction of the U. S. Bureau of Public Roads. Construction was carried out by the railroad, under the direction of R. E. Dougherty, vice-president in charge of improvements and developments, and by Madigan-Hyland, consulting engineers.

Head Freight Brakemen to Ride Cushions; and Have Heaters

Head brakemen on freight trains will henceforth ride in heated quarters fitted with spring cushion seats with arm and back rests, as a result of an agreement announced on October 13 between the Brotherhood of Railroad Trainmen and the Association of American Railroads.

The joint statement in this connection from A. F. Whitney, president of the B.R.T., and J. J. Pelley, president of the A.A.R. says that under the agreement, which becomes effective November 1, "spring cushion seats with arm and back rests will be provided head brakemen and will be installed on locomotives used for freight service, combination freight and passenger service, and combination freight and helper service. Such a seat either will be installed in the locomotive cab or in a shelter cab placed on the tender of the locomotive, the location being optional with the railroad. Heaters are also to be provided in the shelter cabs in territories where necessary.

"The railroads are allowed five years in which to install such seats in locomotives coming under the agreement. All new locomotives covered by the agreement, however, will be equipped when built.

"The negotiations between the trainmen and the railroads resulted from a complaint filed by the former with the Interstate Commerce Commission in an effort to have an order issued requiring that such seating facilities be furnished by all railroads. As a result of the agreement the Brotherhood of Railroad Trainmen has asked the commission to dismiss the complaint."

Pennsy Reports Electrification Progress

The Pennsylvania has announced that electrification work on its line between Paoli, Pa., and Harrisburg and on various freight routes has progressed so rapidly that the entire project will now be pushed to conclusion considerably earlier than had first been expected. When the program was originally announced last January it was indicated that the work would take eighteen months, or until midsummer of 1938. This, it was stated, will be bettered by a number of months, though an exact date cannot as yet be set.

Electrification of the main line between Paoli and Harrisburg is being carried out in two sectors. The first extends from Paoli to Conestoga, a distance of 46.6 miles, and the second from Conestoga to Harrisburg, 36.6 miles. Electrification of

the passenger trackage in the first sector is 78 per cent complete and in the second, 73 per cent complete. The entire present electrification project, including the heavy freight routes both east and west of the Philadelphia area, is 65 per cent complete. On the program as a whole, approximately 9,150 men are now at work, of whom over 2,450 are Pennsylvania electrical engineers, technicians, skilled electric workers and other employees. The remaining 6,700 are employees of contractors engaged on various sections of the project. The entire telephone, telegraph and signal work is being done by railroad forces numbering more than 2,000 men. Of the total of approximately 9,150 men employed on the entire program, about 6,000 are concentrated on the two main line sectors between Paoli and Harrisburg.

Supreme Court Orders

No very important cases affecting the railroads were involved in the numerous orders entered by the Supreme Court of the United States at its session on October 11. The Court did, however, note probable jurisdiction in *South Carolina State Highway Department, et al, appellants, v. Barnwell Brothers, Inc., et al*, which came up on appeal from a lower court decision declaring invalid a South Carolina statute fixing the weight and width of trucks; the lower court held that the law was an unreasonable burden on interstate commerce.

Probable jurisdiction was also noted in *Henneford et al, appellants, v. Northern Pacific Railway Company*, involving the validity of a statute of the state of Washington imposing a tax for the privilege of using within that state any article of tangible personal property purchased subsequent to April 30, 1935. An appeal was taken from the action of a three-judge federal court which permanently enjoined the Washington tax commissioners from levying upon the plaintiff's personal property.

A writ of certiorari was granted in a case (*United States v. Illinois Central Railroad Co.*) wherein the federal government sought to impose upon the I. C. a penalty for alleged violation of the cruelty to animals law in failing to unload cattle within 36 hours. The Circuit Court of Appeals for the Fifth Circuit affirmed the action of the federal district court in dismissing the proceedings with a finding that negligence of an employee is not equivalent to knowledge and wilfulness. Certiorari was also granted in *Erie Railroad Company v. Tompkins*—an appeal from a decision granting the appellee damages because of injuries received as a result of being struck by a projection from an Erie train while walking along the railroad right-of-way.

Freight Car Loading

Revenue freight car loading for the week ended October 2 totaled 847,245 cars, an increase of 6,799 cars or 0.8 per cent above the preceding week, an increase of 27,648 cars or 3.4 per cent above the corresponding week in 1936, and an increase of 141,271 cars or 20 per cent above the same week in 1935, but a decrease of 124,010

cars or 12.8 per cent below the same week in 1930. All commodity classifications except forest products, ore, and coke showed increases over the preceding week, while all commodity classifications except coke showed increases over last year. The summary, as compiled by the Car Service Division, Association of American Railroads, follows:

Revenue Freight Car Loading			
For Week Ended Saturday, October 2			
Districts	1937	1936	1935
Eastern	170,057	163,509	147,796
Allegheny	161,788	164,467	129,560
Pocahontas	58,023	56,377	47,587
Southern	118,032	114,622	101,733
Northwestern ...	135,973	134,892	114,604
Central Western ..	131,522	120,305	108,310
Southwestern ...	71,850	65,425	56,384
Total Western Districts	339,345	320,622	279,298
Total All Roads.	847,245	819,597	705,974
Commodities			
Grain and Grain Products	36,804	31,869	37,535
Live Stock	21,801	20,519	19,585
Coal	163,351	158,467	128,457
Coke	10,347	10,616	7,821
Forest Products ..	38,595	34,772	32,008
Ore	62,189	57,865	33,748
Merchandise			
L.C.L.	174,853	172,924	167,327
Miscellaneous ...	339,305	332,565	279,493
October 2	847,245	819,597	705,974
September 25 ..	840,446	807,243	629,935
September 18 ..	826,565	789,857	706,820
September 11 ..	711,299	700,147	699,786
September 4 ...	804,633	765,131	591,941

Cumulative Total,
40 Weeks 29,886,090 26,993,140 23,818,058

In Canada.—Car loadings for the week ended October 2 totaled 62,330, which was an increase of 2,495 over last year but a decline of 1,209 from the preceding week, according to the summary of the Dominion Bureau of Statistics.

Total for Canada:	Total Cars Loaded	Total Cars Rec'd from Connections
October 2, 1937	62,330	26,426
September 25, 1937 ..	63,539	24,387
September 18, 1937 ..	61,513	23,729
September 26, 1936 ..	59,835	23,134

Cumulative Totals for Canada:
October 2, 1937 1,949,388 | 1,035,757 || September 26, 1936 .. | 1,789,022 | 892,331 |
| September 28, 1935 .. | 1,716,748 | 823,775 |

Hearings Concluded in C. G. W. Case

The Interstate Commerce Commission, on October 13, held the final hearing and closed the record in the matter of the reorganization of the Chicago Great Western. The case had been previously closed, but was reopened to hear testimony on an amended plan of reorganization which was substituted for the original plan of the debtor when it was found that the Pullman Standard Car Manufacturing Company was not satisfied with the manner in which its claims against the debtor had been taken care of. The railroad had planned to pay the claims off in new bonds, but found that it could not get the Pullman company to assent to this feature. In view of this, the debtor decided to issue an equipment trust and pay off the company in full in cash.

The only witness during the final hearing was W. H. Sievers, general auditor of the Chicago Great Western, who testified concerning this issuance of equipment trust certificates and described the present financial position of the debtor. During

questioning by counsel, he admitted that the new wage increases to the operating and non-operating unions would cost the road about \$525,000 annually.

The dispute between the debtor and the Reconstruction Finance Corporation came into the front again when C. M. Clay, counsel for the R.F.C., asked Mr. Sievers why the debtor had computed the interest on the R.F.C. loan to the debtor at 4 per cent when the face of the note showed 6 per cent. Mr. Sievers seemed unable to give Mr. Clay a satisfactory answer to this query.

During the hearing counsel for the various parties engaged in a learned discussion of the advantages and disadvantages of setting up a new corporation to take over the assets of the old Chicago Great Western. It was pretty generally agreed that, from the legal point of view, the mechanics of setting up a new company would be much simpler than trying to remake the present company to meet the provisions of the reorganization plans. The next step will be for the commission to either accept the debtor's plan or formulate a plan of its own for presentation to the District court in Chicago.

President Roosevelt Calls Special Session

President Roosevelt, in a proclamation dated October 12, announced that he had decided to reconvene the Congress in special session on November 15, to deal primarily with such matters as crop control, wages and hours, and a revision of the anti-trust laws. In a radio speech on the same day, he outlined to the country his reasons for bringing the Congress back to Washington a month and a half early.

In the field of railroad legislation the most important bill which may come up for consideration is the train-limit bill which would limit the length of all trains in interstate commerce to 70 cars. This bill has already passed the senate and is on the calendar in the house. Chairman Lea of the House Committee on Interstate and Foreign Commerce has announced that he favors a revision of the senate version of the bill and that he will hold public hearings on it before it comes up for a vote in the House.

The Pettengill bill, which has already passed the house, will be on the Senate calendar, but it is not known at this time whether Chairman Wheeler of the senate Committee on Interstate Commerce will find time to hold hearings on it. It is expected that Senator Wheeler will devote a good deal of his time to framing legislation to curb the evils of holding companies in the railroad field. His bill will be based upon the evidence which his subcommittee has recently uncovered. It is understood that this committee will resume hearings during the latter part of this month and will devote its time to looking into the negotiations which have led up to the formulation of reorganization plans in the cases of such companies as the Missouri Pacific, Chicago, Milwaukee, St. Paul & Pacific, Chicago & Eastern Illinois, and St. Louis-San Francisco.

There is also a good chance that some type of executive department reorganization

bill will be passed during the coming session of Congress. Bills are pending in both houses which would permit the President to reorganize the executive departments, but would not give him jurisdiction over such independent agencies as the Interstate Commerce Commission.

The status of pending railroad legislation was given in an article in *Railway Age* for August 28, page 272.

I. C. C. Disclaims Jurisdiction Over Proportional Water Rates

The Interstate Commerce Commission, Division 3, has disclaimed jurisdiction and has refused to render an advisory opinion in the investigation and suspension case (No. 4280) wherein the Inland Waterways Corporation proposed to establish certain proportional rates on grain and grain products and soya beans from St. Paul, Minn., Minneapolis, Chicago, Kansas City, Mo., Cairo, Ill., and from river ports between the first four named and Cairo to a group of lower river ports. The commission found that the mere filing of the Federal Barge Line's tariff proposing the proportional rates did not cause to come into being "a common arrangement for continuous through transportation" which would bring the matter under the Interstate Commerce Act.

The proposed schedules were "identical with the present local rates" and Inland's "primary object" in filing the port-to-port proportionals was to enable it to issue through bills of lading. But, the report says, several provisions of the suspended tariff "preclude the use of through billing." All of the parties recognized the limits of the commission's jurisdiction, but the Barge Line desired an opinion "as to what would be reasonable minimum rates for water transportation of grain," and promised that it would maintain for at least six months "such rates as we may find would be reasonably compensatory." The latter would be applied as proportional rates and as local port-to-port rates. Protesting rail carriers objected to the commission's rendering any advisory opinion.

"It is not our practice to express advisory opinions in matters over which we have no jurisdiction," the report says. "Especially would it be inappropriate to do

so over the objection of parties to the proceeding. If our views are needed or desired as to the reasonableness of the rates under suspension and as to their relation, if any, with other rates, such views may be obtained through a proceeding looking to the establishment of joint rates in conformity with the Inland Waterways Corporation Act. Respondent is fully advised of its rights and the procedure under that act, but has not elected to avail itself of the remedies therein provided. The principal and decisive issue herein is raised by the rail carriers' contention that we have no jurisdiction over the proposed rates, as they are port-to-port water rates, and, as the evidence discloses, there is no common arrangement for a continuous carriage or shipment. The rail carriers further contend that we are not empowered to take any action with respect to the suspended rates other than to strike the schedule from our files."

The latter action was taken. The majority opinion was by Commissioners McManamy and Miller; Commissioner Porter wrote a separate concurring opinion.

Railroads Need Advance in Rates

(Continued from page 538)

large increase in net operating income. This decline of railway buying is having an adverse effect throughout general business and is one of the principal causes of the recent sharp decline in steel production.

"What is the solution of the problem presented? Plainly it is to let the railways as promptly as possible do what other industries have done—advance their charges to offset the increases that have occurred in the prices, wages and taxes they must pay. It would require an advance of approximately 14 per cent in freight rates to make average railway revenue per ton per mile as high compared with commodity prices as it was in 1930. This would increase railway earnings about \$500,000,000 annually.

"It may be said that a substantial advance in freight rates would hurt general business. Certainly, however, if there is justification for the advances in prices that have been made by other industries, there

is justification for a corresponding advance in railway rates. It may be said also that an advance in railway rates would divert traffic from the railways to other carriers. The managers of the railways are the best judges of that, and undoubtedly would make whatever readjustments in rates they subsequently found necessary to meet competition. The danger of diversion of a large amount of traffic to trucks is now minimized by the fact that truck operators have experienced large increases in their operating costs and also need advances in rates.

"The advances in prices and wages that have occurred throughout industry, including those the railways must pay, have been made in accordance with policies of the federal government. Whether these policies are economically wise or not, the public cannot afford to have the government treat the railways like other industries in regard to expenses and taxes, and differently regarding rates and earnings. Private ownership and management of railways could not long survive under such unreasonable and unfair government discrimination. The only 'solution' of the present railway problem is a substantial advance in freight rates or government ownership; and fortunately the public is not likely to regard government ownership as the preferable 'solution'."

Board Estimates Car-loading Rise

(Continued from page 538)

centration of the traffic, so far as is practicable, on the low cost transportation lines. This reduction in transportation cost can only be brought about by heavy, economical trains. But if this bill becomes a law, it would eliminate the principal benefit to be obtained from consolidation."

Col. A. B. Barber, manager, Transportation department, Chamber of Commerce of the United States, was the principal speaker at the luncheon following the presentation of committee reports. Presenting, as the theme of his address, eight aims in the national transportation field endorsed by the chamber and published in a booklet issued by that body (summarized in the *Railway Age* for October 2, page 464),

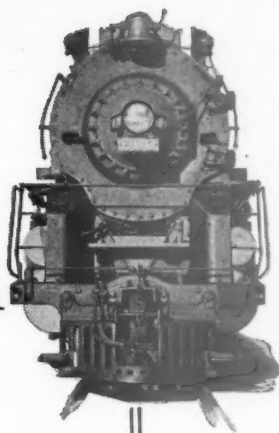
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Photo by Collons

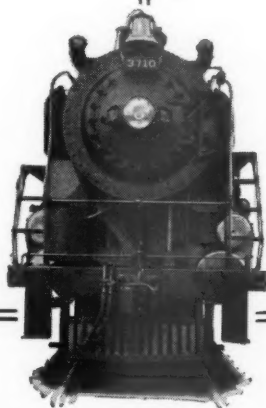
Looking Eastward on the C. B. & Q. at Osceola, Ia.

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Locomotive Designs are CHANGING

Locomotives recently purchased and those being considered today provide higher horsepower capacity and higher speeds in line with present day operating conditions. » » » Lima's engineers will gladly consult with you and recommend designs that provide this higher capacity to meet modern requirements.



LIMA LOCOMOTIVE WORKS



INCORPORATED, LIMA, OHIO

Col. Barber added to these needs what he called "sound administration under the legislation" affecting transport. Under this topic he made reference to business' favorable reaction to the procedure of the Interstate Commerce Commission in the past. It is the lack of such procedure, the speaker asserted, which has been "a characteristic weakness of some of the so-called emergency administrations of the past few years." However, in viewing present day tendencies Col. Barber was able to state: "I am pleased to say that this tendency seems to be on the wane and the realization is growing that if the commission carries out effectively its quasi-judicial and the other regulatory duties affecting the public interest, it can and should leave the field of managerial responsibility where it belongs—with the managements of the carriers and with their national and regional organizations."

Reviewing favorable accomplishments in the field of federal transport legislation, the Chamber of Commerce official pointed to the laws of 1933, which "practically eliminated valuation and revised the rule of rate making by doing away with the inflexible formula of section 15a of the Transportation Act of 1920, substituting a rule more in keeping with the needs of the railroads and obviously more acceptable to the Interstate Commerce Commission." He further referred to the repeal of the recapture clause by the same legislation, and to the passage of the Motor Carrier Act in 1935, which, he claimed, opens the way to still further improved conditions.

Speaking extempore, Col. Barber reasserted his support of the principle that the railroads should, by their rate-making policies, attempt to spread markets and industrial activity, pointing out that, in this respect, the roads possess a great power for good in the nation's business.

Of special interest is the detailed report presented by the committee on car construction under the chairmanship of C. J. Fagg, manager, Commerce & Trade Bureau, Chamber of Commerce of Newark, N. J., containing findings additional to those rendered in a report to the board at Elmira, N. Y., April 8. Among the quotations given from the proceedings of other advisory boards concerning car construction was the statement that "it is our belief that the railroads alone are the best judges as to what cars are required in number and type to properly serve the requirements of the shippers on their respective roads. Varied commodity production necessitates different types and sizes of cars; both our steel and lumber people are constantly advocating the superior quality of their respective products for car construction, and were we to initiate a survey [among shippers] the responses would be more conflicting than helpful."

Commenting upon this, however, the report suggested that "there is laxity on the part of the railroads in not fully informing shippers, as a whole, regarding new equipment; that some railroads are building improved types of equipment and such progress is not being followed by others in a uniform way." The report added: "Your committee is still without information from the carriers as to what method

or plans they are following with respect to co-operation with the shippers in creating a change in their equipment or ascertaining the needs of shippers in order to increase their loading, hold and retain their markets and encourage the movement of such commodities by rail."

With respect to the increasing construction of special-type cars, the committee held the opinion that such specialization provides a load only in one direction which appears to the group to impose upon the majority of shippers an unfair burden of transportation costs. This characterization, the committee did not apply to the recently-introduced "removable roof box car," however, averring that, since "the new equipment affords heavier loading and is of such construction, it may be used in general service, eliminating unreasonable transportation costs resulting from inability to get a return load. Carriers should especially study this feature in co-operation with the shipper before adopting specialized equipment," the report added.

The remainder of the report was taken up with a survey of comments received from shippers since the Elmira meeting. Several furnish vigorous backing of the committee's own opposition to over-specialization in car types. Another presents reasons for the adoption of a standard-size box car by the carriers, to be assigned a length of 36 ft. 6 in., holding that shippers be granted the privilege of partial loading or unloading in transit. Such a measure, the comment holds, is dependent upon the application of the same minimum weight, regardless of the size of the car, and the basing of such minimum on the actual loading capacity of a 36-ft. car for each commodity listed in the classification. In support of such a measure the comment points out that "the tendency today seems to be to ship in relatively small quantities, so that a car of 36 ft. 6 in., together with the privilege of partial loading or unloading in transit, should answer the purpose."

In closing, the committee complained that the carriers, failing to ascertain the real needs of shippers, were in many cases building the wrong type of equipment. "It is the observation of your committee that too many railroads are building equipment they believe will be operated solely on the owners line, however, necessity oftentimes requires interline movement. This means, therefore, that special equipment is a national problem."

At the close of the luncheon a motion was passed authorizing J. K. Hiltner, general chairman of the board, and traffic manager, United States Pipe & Foundry Company, Burlington, N. J., to appoint a committee of seven to work with the Railroad Contact Committee, under the chairmanship of G. Metzner, manager of freight transportation, New York Central, to consider a proposal that the national demurrage tariff be amended to provide for exemptions from demurrage charges on railroad equipment that cannot be loaded or unloaded on account of a strike existing at shipper's or receiver's place of business.

With respect to foreign cars it was suggested that in lieu of payment of demurrage on such cars, the shipper pay only the per diem required.

Construction

ATLANTIC COAST LINE.—Examiner W. J. Schuttrumpf of the Interstate Commerce Commission, in a proposed report to the commission, has recommended that this company be permitted to construct and operate an extension of its line beginning at a point of connection with its Delco to Acme branch and extending in a northerly direction to a point at or near the northern boundary of the right-of-way of the Seaboard Air Line to a connection with tracks to be constructed by the Riegel Paper Corporation, 0.95 mile, in Columbia County, N. C.

CENTRAL OF NEW JERSEY.—The Interstate Commerce Commission, Division 4, has authorized this company to construct a line extending easterly from a connection with its main line near 33rd street, Bayonne, N. J., to the bulkhead of a port terminal proposed to be constructed in the waters of upper New York Bay, 1.9 miles.

GRAND TRUNK WESTERN.—This company recently entered into an agreement with the city of Detroit, Mich., and the Michigan State Highway Department for the separation of grades at Seven Mile road and John R street, by carrying two main tracks and two switching leads of the railroad over these streets on semi-through plate-girder spans on concrete box abutments. The project will involve the raising of the railroad grade a maximum of 12.7 ft. and the lowering of the streets a maximum of 10.5 ft. In general, the railroad company will perform the track work and the city the street work, while the highway department will construct temporary trestles and the permanent bridges, retaining walls and the embankments for the railroad grade. Including the cost of certain additional land purchases, the estimated cost of the project is \$970,000. The railroad commenced laying temporary tracks on September 7 and it was expected that other construction will be actively under way by October 1.

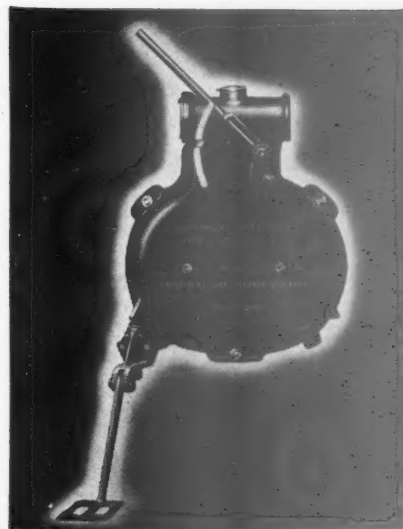
A contract has been awarded by the Grand Trunk to Hamer Brothers, Inc., for the construction of a reinforced concrete box culvert with two openings 15 ft. by 18 ft. under its main line near Goodells, Mich. The new structure will replace a present double-track bridge consisting of 70-ft. deck plate-girder spans supported by concrete abutments 38 ft. high.

NEW YORK CENTRAL.—Contracts have been let by this road for work in New York City as follows: Paving express highway, West 105 street and St. Clair place, N. Y., to the Good Roads Engineering & Contracting Co., Wantagh, N. Y.; highway and park fences, West 72 street and Dyckman street, to Vulcan Rail & Construction Co., Maspeth, N. Y.; spring cable fence, Riverside and Fort Washington Parks, at West 72 street, to F. J. Croissant, Albany, N. Y.; reconstruction and extension of loading platforms, etc., Rossiter Stores, 59 street and 12 avenue, to W. F. Babor & Co., Inc., N. Y.; land-

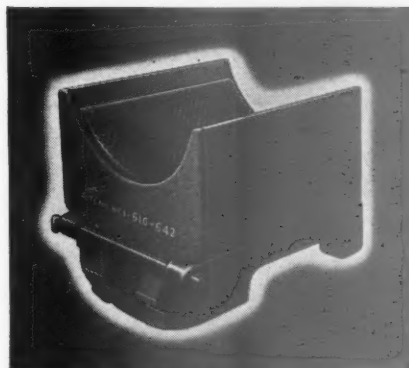
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WE HAVE A REPUTATION TO MAINTAIN

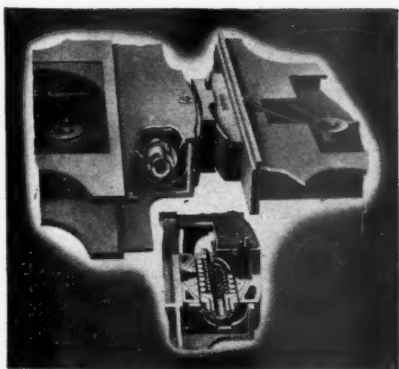
We are proud of the performances of the various devices Franklin has developed to improve the economy and operation of the steam locomotive. » » » In furnishing replacement parts for these devices we have this reputation to maintain—there can be no divided responsibility. » » » The device itself can function no better than the replacement part used in its maintenance. » » » Franklin replacement parts for Franklin devices are furnished with this thought always in mind. You can use them with every confidence of maximum economy and dependability.



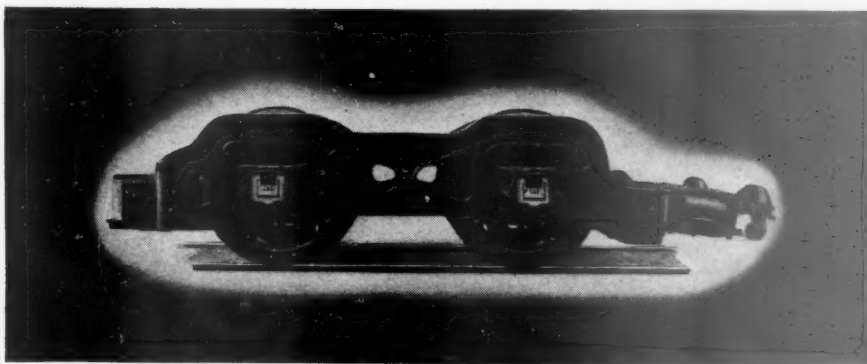
Franklin No. 8 Butterfly Type Firedoor



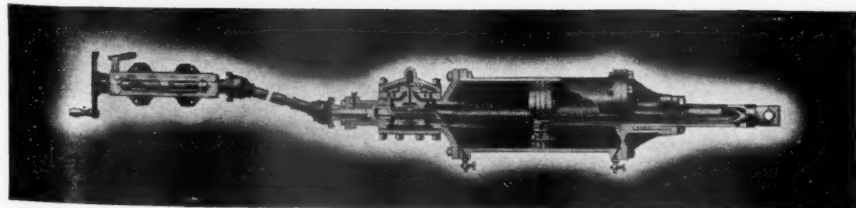
Franklin Driving Box Lubricator and Spreader



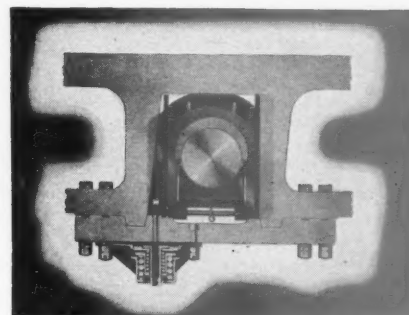
Radial Buffer Type E-2



The Locomotive Booster



Precision Power Reverse Gear



Franklin Automatic Compensator and Snubber



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK

CHICAGO

MONTREAL

scaping from West 91 street to West 119 street, to Outpost Nurseries, Inc., Ridgefield, Conn.; and similar work at Riverside Park, West 135 street, to Delma Engineering Corp., Bronx, N. Y.; and at Riverside Park, West 92 street to West 109 street, to Tully & DiNapoli, Inc., New York.

NORTHERN PACIFIC.—A contract has been awarded to Peder P. Gjardi, Seattle, Wash., for the enlargement and alteration of the present warehouse which this company has at Occidental and King streets, Seattle. This structure is leased to the Pacific Fruit and Produce Company, whose business has developed to such an extent that additional space is required. The plans provide for increasing both the office space and the warehouse space. The new structure will be 45 ft. by 250 ft. in plan, will have three stories and a basement and will be of concrete and brick construction. The estimated cost of this project is \$175,000.

This company has also commenced the construction of a new wye track between its Colorado Street line and its Second Avenue main line track at Seattle, which will be used for turning passenger equipment and which will replace what is known as the Spokane Street wye. The latter wye track crosses two important highways and is being abandoned as a result of agitation against the present operations. The cost of the new wye track will be about \$25,000.

Other activity on Northern Pacific property at Seattle includes the construction by Van Waters & Rogers, Inc., of a warehouse between First Avenue south and Second Avenue south. This structure, which will cost approximately \$75,000, is being constructed under contract by the Austin Company. It will be 100 ft. by 300 ft. in plan, of concrete and brick construction and one story high. In conjunction with this improvement the Northern Pacific is constructing a spur track to serve the new warehouse and is improving a street on the property.

PENNSYLVANIA.—A contract has been given to the Turner Construction Company, Philadelphia, Pa., for the construction of an extension to passenger station, for a tower, etc., at Harrisburg, Pa. A contract has also been given to John F. Casey Company, Pittsburgh, Pa., for the reconstruction of a bridge over Buffalo Creek, Buffalo, N. Y.

UNION PACIFIC.—Work is expected to begin soon on the construction of a new bridge across Mill Creek at Walla Walla, Wash., to replace an existing structure. The necessity for the new bridge, which will cost about \$35,000, is brought about by the fact that the channel of the creek is being altered in accordance with a flood-control program. The work will be done by company forces.

UNION PACIFIC.—This company now has under construction at Seattle, Wash., a one-story warehouse, 288 ft. wide and 548 ft. long, which is to be leased to Sears, Roebuck & Co. This structure, which is being built under contract by the General

Construction Company, Seattle, is of brick and frame construction on a concrete substructure. It is located between First Avenue south and Second Avenue south and fronts on Hudson avenue. This structure will cost about \$230,000.

Equipment and Supplies

Burlington Equipment Program

The Chicago, Burlington & Quincy has announced plans for the expenditure of \$4,888,000 for the purchase of locomotives and freight and passenger cars. As soon as arrangements have been made for the sale of the necessary equipment trust notes, which will total \$3,650,000, formal inquiries will be issued for 100 Hart ballast cars, 3 stainless-steel dining and 3 stainless-steel chair cars for the "Aristocrat," 2 stainless-steel dinette-coaches and 2 stainless-steel sleepers for the Denver "Zephyrs," and 1 stainless-steel dinette-coach car with kitchen for the original "Zephyr." In addition to these cars, the equipment trust notes will cover equipment to be built in company shops, including 5 locomotives; 250 automobile cars, 100 of which will be equipped with automobile loading devices; 600 box cars; 100 hopper cars; and 400 coal cars, including 100 fifty-five-ton cars and 300 fifty-ton cars.

FREIGHT CARS

THE BARRETT COMPANY has ordered 15 tank cars of 6,000 gal. capacity from the General American Tank Car Corporation. Inquiry for this equipment was reported in the *Railway Age* of September 25.

THE VIRGINIAN placed orders recently covering repair material for approximately 800 of its 120-ton gondola cars which the railroad company expects to repair in its own shops at Princeton, W. Va. This is a continuation of a program inaugurated about two years ago covering repairs to a large quantity of its coal-carrying equipment.

IRON AND STEEL

THE VIRGINIAN has ordered 8,200 tons of 131-lb. rail from the Bethlehem Steel Company. Purchase of accessories, such as tie plates, joints, bolts, spikes, rail anchors, frogs, switches and guard rails, has been divided among many concerns.

MISCELLANEOUS

THE L. C. L. CORPORATION has ordered 240 air-activated containers from the American Car & Foundry Company.

Supply Trade

E. T. Rees has been appointed manager of the Indianapolis, Ind., office of **Cutler-Hammer, Inc.**, Milwaukee, Wis. **F. J. Woldrich** has been appointed manager of the newly opened sales office at Portland, Ore.

Frederick D. Benz, manager of wire sales for the Chicago branch of **United States Rubber Products, Inc.**, has been appointed district manager of wire sales for the Pacific division, with headquarters at San Francisco, Cal.

Ernest L. Nye and **J. Homer Platten** have been elected members of the board of directors and of the finance committee of **L. C. L. Corporation**, New York. Mr. Nye is a member of the firm of **Freeman & Company** and a director of the **American Car & Foundry Company** and Mr. Platten is executive assistant to the president of the **American Car & Foundry Company**.

The Unit Truck Corporation, 15 Exchange Place, Jersey City, N. J., was recently incorporated to introduce the "Unit Truck" to the railway trade. The officers and directors of the new company are: **Lester A. Crone**, president; **Alfred F. Crone**, vice-president, and **Charles R. Busch**, vice-president, all of whom are connected with the **Buffalo Brake Beam Company**.

E. H. Batchelder, Jr., sales manager of the **Insulite Company**, Minneapolis, Minn., has been elected senior vice-president. He has also been appointed assistant to the president of the **National Pole & Treating Co.** and assistant to the president of the **International Lumber Co.**, both of which, together with the **Insulite Company**, are subsidiaries of the **Minnesota & Ontario Paper Company**. **E. W. Morrill**, executive assistant to Mr. Batchelder, has been advanced to general sales manager of the **Insulite Company**.

C. A. Ohl, director of sales and acting director of engineering for the **Bendix-Westinghouse Automotive Air Brake Company** at Pittsburgh, Pa., has been appointed director of sales and engineering. **Fred L. Hall**, eastern district manager, with headquarters at New York, has been appointed sales manager and transferred to the general office, Pittsburgh. **R. H. Casler**, district engineer of the central district at Detroit, Mich., has been appointed chief field engineer, with headquarters at Pittsburgh. Replacing the large central and eastern districts, the **Bendix-Westinghouse** field organization will be divided into five districts located at New York, Boston, Mass., Atlanta, Ga., Washington, D. C., and Philadelphia, Pa.

Craig W. Marshall has been appointed manager of railway sales of the **United States Gypsum Company**, with headquarters at the company's main office, Chicago. He will direct all sales to the rail-

NO. 36 OF A SERIES OF FAMOUS ARCHES OF THE WORLD



THE GOLTZSCH VALLEY BRIDGE GERMANY

The Goltzsch Valley Bridge, near Plauen in Vogtland (Saxony), is the largest structure of its kind on the German National Railways. It consists of four tiers of arches comprising a total of over eighty and is of stone and brick construction. Utilized solely for railway

traffic, it is 1,664 feet long and 240 feet in height.

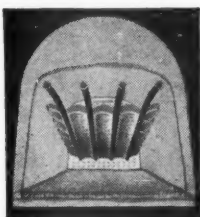
* * *

Security Sectional Arches for Locomotive service, developed by the American Arch Company, Inc., are applicable to every type and design of locomotive firebox.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

**HARBISON-WALKER
REFRACTORIES CO.**

Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED**

*Locomotive Combustion
Specialists* » » »

roads of United States Gypsum Company products. Mr. Marshall began his railroad experience early as an apprentice machinist with the Union Stock Yards Railroad Company. He then attended the University of Valparaiso, Carnegie Institute



Craig W. Marshall

of Technology, and Ohio Northern University, completing a course in civil and mechanical engineering. Shortly after leaving school Mr. Marshall entered the army as a lieutenant in the Engineer Corps. Following his discharge from the army he was employed by the Concrete Steel Company, Chicago, and soon became assistant western manager, continuing in that capacity until 1922, when he joined the American Arch Company, as district manager of the industrial department. In 1925 he was appointed eastern sales manager of the Sunbeam Electric Manufacturing Company, and continued in that capacity for nearly eleven years.

OBITUARY

Miss A. M. Kelly, secretary and assistant treasurer of the G. M. Basford Company, passed away at her home, 1045 Park avenue, New York City, on Wednesday, October 6. Miss Kelly was secretary and assistant treasurer of the Basford Company since its founding in 1916, and was active in its affairs up to the time of her death. Prior to her connection with that company she was with the American Locomotive Company and Joseph T. Ryerson & Son. In addition to being secretary of the G. M. Basford Company, she was also secretary and treasurer of the Locomotive Feed Water Heater Company.

TRADE PUBLICATION

"MARCHING ON WITH INDUSTRY."—This is the title of a 12-page illustrated booklet published by the Industrial Brownhoist Corporation, Bay City, Mich., which covers this company's complete line of Diesel and gasoline locomotive cranes, ranging in capacities from 10 to 50 tons. Included in the booklet are views showing the cranes engaged in all kinds of bucket, hook and magnet work, as well as technical matter describing the important features of their construction.

Financial

APACHE.—Income Bonds.—This company has applied to the Interstate Commerce Commission for authority to issue \$900,000 of first mortgage, 5 per cent, non-cumulative, 20-year income bonds, to be used to refund and retire \$600,000 of first mortgage bonds and a second mortgage note for \$455,000 and accrued interest.

CANADIAN PACIFIC.—Steamship Service.—The Interstate Commerce Commission, Division 4, has authorized this company to install a new steamship service, to be known as the "Canadian Pacific Great Lakes Line," between a point on its line of railroad at Port McNicoll on Georgian Bay, Province of Ontario, Canada, and the Lake Michigan ports of Milwaukee, Wis., and Chicago, Ill.

CHESAPEAKE & OHIO.—Acquisition.—The Interstate Commerce Commission, Division 4, has announced that it will hold oral argument on October 20, in the case of the application of this company to effect direct control of the Nickel Plate and Erie.

CHESAPEAKE & OHIO.—Stock.—The Interstate Commerce Commission, Division 4, has authorized this company to extend, for two years from October 1, the time within which scrip certificates may be exchanged for its series A preference stock which was issued last December.

CHESWICK & HARMAR.—Operation.—The Interstate Commerce Commission, Division 4, has authorized this company to operate in interstate and foreign commerce its line extending northerly from a connection with the main line of the Conemaugh division of the Pennsylvania, near Cheswick, Pa., to Harwick, thence over a switchback to a connection with the main line of the Bessemer & Lake Erie, near River Valley Station, 4.2 miles of main track and 2.5 miles of side track.

CHICAGO & EASTERN ILLINOIS.—Reorganization.—The Interstate Commerce Commission, Division 4, has denied the petition of this company for reconsideration of the order of Division 4 of July 30, permitting John Carson, as Consumers Counsel for the National Bituminous Coal Commission, to intervene in the reorganization proceedings of this company.

CHICAGO, BURLINGTON & QUINCY.—Equipment Trust Certificates.—This company has applied to the Interstate Commerce Commission for authority to assume liability for \$3,650,000 of 2½ per cent equipment trust certificates, maturing in 10 equal annual installments of \$365,000 on October 1, in each of the years from 1938 to 1947.

CHICAGO, BURLINGTON & QUINCY.—Equipment trust notes.—This company has called for bids on October 20 on \$3,650,000 of 2½ per cent equipment trust certificates due in one to ten years. The proceeds will

be used to help finance the purchase of equipment costing \$4,880,000.

DENVER & RIO GRANDE WESTERN.—Abandonment.—The trustees have applied to the Interstate Commerce Commission for authority to abandon a line extending from Southern Junction, Colo., to Blende, 3.4 miles.

ILLINOIS TERMINAL.—Reorganization.—Reorganization and consolidation of the Illinois Terminal Railway and five subsidiary lines has been approved by the Illinois Commerce Commission. The subsidiaries include the Illinois Traction Corporation, the St. Louis, Troy & Eastern Railroad, the Alton & Eastern Railroad, the St. Louis & Illinois Belt Railway and the Alton Terminal Railway. The company was also authorized to acquire the property of the St. Louis Electric Terminal Railway and the McKinley bridge. The consolidation will make no change in ownership but will simplify the corporate structure.

MINNEAPOLIS & ST. LOUIS.—Receivers' Certificates.—The receivers have applied to the Interstate Commerce Commission for authority to issue \$805,000 of receivers' certificates in renewal of a like amount now outstanding.

MONTPELIER & WELLS RIVER.—Abandonment.—The Barre & Chelsea has applied to the Interstate Commerce Commission for authority to abandon 7,171 ft. of a branch line in East Barre, Vt.

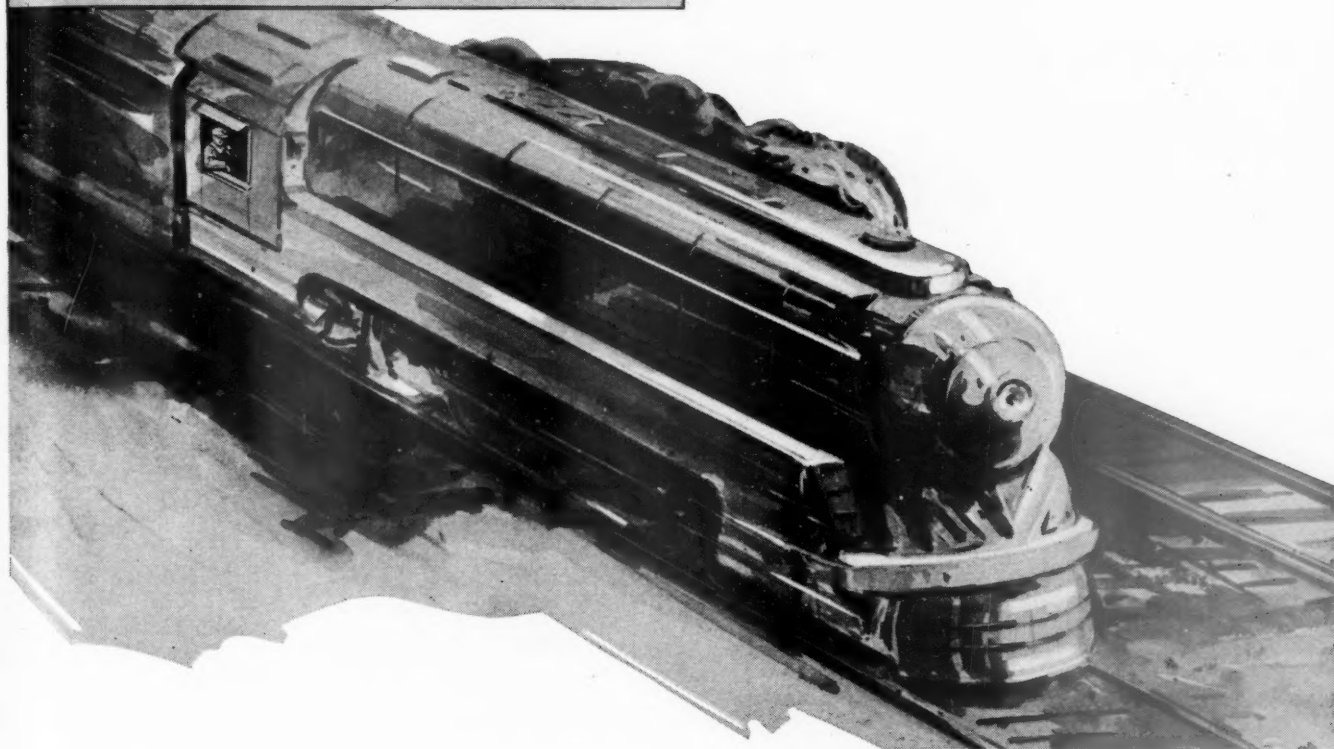
NEW YORK, NEW HAVEN & HARTFORD.—Reorganization.—The Interstate Commerce Commission, Division 4, has issued an order permitting the United Gas Improvement Company to intervene in the reorganization proceedings of this company.

NEW YORK, NEW HAVEN & HARTFORD.—Abandonment.—Examiner Jerome K. Lyle of the Interstate Commerce Commission, in a proposed report, has recommended that the commission authorize the trustees to abandon operation and the trustees of the Old Colony to abandon the line extending from West Bridgewater, Mass., to Eastondale, 3.5 miles. He also recommends that the commission refuse to permit the trustees of the New Haven to abandon the operation and the trustees of the Old Colony to abandon the line extending from Matfield, Mass., to West Bridgewater, 1 mile. The examiner would also have the commission allow the trustees of the two companies to abandon the line from West Hanover, Mass., to Hanover, 4.2 miles, but would deny them the right to abandon the line from Randolph, Mass., to Stoughton Junction, 5 miles.

NEW YORK, ONTARIO & WESTERN.—Trustee and Counsel's Fees.—The Interstate Commerce Commission, Division 4, has ordered that Frederic E. Lyford be paid the sum of \$12,000 a year for serving as trustee of this company and that Elbert N. Oakes be paid \$6,000 a year as counsel to the trustee.

PACIFIC COAST.—Abandonment.—The Interstate Commerce Commission, Division

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Increases Hauling
Capacity up to 15%**



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Make your locomotives more efficient by installing Elesco feed water heating equipment . . . either the closed type with pump or the injector type.

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4, has authorized this company to abandon a branch line extending from Santa Maria, Calif., to Guadalupe, together with a branch extending from Betteravia Junction, Calif., to Betteravia, a total of 10.9 miles.

ST. LOUIS-SAN FRANCISCO.—Reorganization.—The Interstate Commerce Commission, Division 4, has authorized the payment of \$20,000 to Frank A. Thompson, Ivan H. Light, Robert G. Starr, Edward S. Seidman, and Achilles H. Kohn as payment for their services as special counsel in the reorganization proceedings of this company.

TEXAS & PACIFIC.—Equipment Trust.—A syndicate headed by F. S. Moseley & Co. has offered \$1,275,000 of 2¾ per cent equipment trust certificates of this company, maturing in installments over 15 years, at prices to yield from 0.85 per cent to 3 per cent. The successful bidders for the issue paid 100.434 for it.

UNION PACIFIC-CHICAGO & NORTH WESTERN.—Self Insurance.—The Interstate Commerce Commission, Division 5, has authorized the Interstate Transit Lines, highway affiliate of these two companies, to qualify as a self-insurer under Section 215 of the Motor Carrier Act.

Dividends Declared

Kansas City, St. Louis & Chicago.—6 Per Cent Preferred, \$1.50, payable November 1 to holders of record October 19.

Average Prices of Stocks and Bonds

	Oct. 13	Last week	Last year
Average price of 20 representative railway stocks..	35.11	37.90	59.93
Average price of 20 representative railway bonds..	71.93	73.61	84.93

Railway Officers

EXECUTIVE

H. Morton has been appointed assistant to vice-president and general manager of the Canadian National, with headquarters at Moncton, N. B.

C. E. Simmons, secretary and treasurer of the New York, Ontario & Western, has been elected vice-president and **E. G. Taylor**, assistant treasurer, has been elected treasurer.

L. R. Capron, freight traffic manager of the Northern Pacific, who has been appointed assistant vice-president, traffic department, of the Chicago, Burlington & Quincy, with headquarters at Chicago, as reported in the *Railway Age* of October 9, has been in railway service almost continuously for 35 years. He was born on June 27, 1883, at Litchfield, Ill., and entered railway service in 1902 as an office boy on the Burlington at St. Paul, Minn. For a time during the following year he served as office boy to Frank B. Kellogg, formerly secretary of state. Later in the

same year he returned to railway service as an office boy on the Northern Pacific, being made a clerk in the following year. In 1912, Mr. Capron became chief rate clerk and in 1914 he was appointed chief clerk to the vice-president, being further promoted in the following year to assistant general freight agent. Up to this time



L. R. Capron

Mr. Capron had been located continuously at St. Paul, Minn. In 1920, he was transferred as assistant general freight agent to Seattle, Wash. In the following year he returned to St. Paul as assistant freight traffic manager, which position he held until 1924, when he was advanced to freight traffic manager.

FINANCIAL, LEGAL AND ACCOUNTING

A. L. Wynn, assistant general claim agent of the Chicago & North Western, who has been appointed general claim agent of the system, as reported in the *Railway Age* of October 2, was born on June 15, 1891, at Murphysboro, Ill. Prior to joining the North Western System in June, 1923, as claim agent of the Chicago,



A. L. Wynn

St. Paul, Minneapolis & Omaha, Mr. Wynn had served as claim agent of the St. Paul City Railway. Two years after entering the service of the Omaha, he went with the North Western as district claim agent at Huron, S. D., where he remained for

10 years. At the end of this period he was sent to Chicago as compensation claim agent. In January of this year Mr. Wynn was promoted to assistant general claim agent, which position he was holding at the time of his recent appointment as general claim agent, effective October 1.

W. S. Iden has been appointed general freight claim agent of the Missouri-Kansas-Texas of Texas, with headquarters at Dallas, Tex., to succeed **H. Bierman**, who has retired.

Leon E. Marchebout, acting treasurer of the Southern Pacific of Mexico, with headquarters at Guadalajara, Jalisco, has been elected treasurer. **W. C. Doudna** has resumed the position of general auditor, with headquarters also at Guadalajara.

Arthur C. Spencer, general solicitor for the Northwestern district of the Union Pacific at Portland, Ore., has been appointed western general counsel to succeed **J. M. Souby**, who has been appointed assistant to Judge R. V. Fletcher, head of the legal department of the Association of American Railroads, Washington, D. C. **Roy F. Shield**, assistant general solicitor at Portland, has been promoted to general solicitor to succeed Mr. Spencer.

OPERATING

M. J. Reynolds, special assistant to the president of the Baltimore & Ohio Chicago Terminal, has been appointed to the newly-created position of supervisor of terminal operation.

V. A. Slaughter, general live stock agent of the Southern, with headquarters at Washington, D. C., has retired because of ill health. **N. Moore** has been appointed general live stock agent, with headquarters at Atlanta, Ga.

F. A. Dawson has been appointed superintendent of freight transportation of the Cleveland, Cincinnati, Chicago & St. Louis, with headquarters at Indianapolis, Ind., to succeed **R. R. Harris**, who has retired after more than 52 years of service with this company.

Ralph O. Jensen has been appointed to the newly-created position of assistant superintendent of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Schiller Park, Ill., with jurisdiction over the Chicago Terminal division. The position of superintendent of this division, which was held by **F. W. Urbahns** until his death on September 20, has been abolished.

H. A. Carson, general freight agent of the Central Vermont at St. Albans, Vt., has been appointed general manager, as reported in the *Railway Age* of October 9. Mr. Carson was born in Toronto, Ont., in 1888. He was appointed commercial agent of the Grand Trunk at Montreal in 1917, district freight agent of the Canadian National at Toronto in 1928 and general freight agent of the Canadian National-Grand Trunk at Boston, Mass., in 1930. In 1932 he became general freight agent of the Central Vermont, the position he



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held until his recent appointment. Mr. Carson is a director and general freight agent of Central Vermont Terminals, Inc., of New York, a member of the Vermont



H. A. Carson

State Chamber of Commerce, New England Council, Associated Industries of Vermont and the New England Traffic Club.

M. E. Barnes, superintendent of the Northern division of the Central Vermont, with headquarters at St. Albans, Vt., has been appointed assistant general manager, as reported in the *Railway Age* of October 9. Mr. Barnes entered the service of the Central Vermont in 1903 and served in the transportation, treasury, mechanical and executive departments. He was ap-



M. E. Barnes

pointed superintendent of the Northern division in 1932, which position he held until his present promotion to assistant general manager.

TRAFFIC

Frank E. McKenzie has been appointed assistant general freight and passenger agent of the Charleston & Western Carolina, with headquarters at Augusta, Ga.

John E. Lonn, freight representative for the New York Central at Chicago, has been appointed general agent at San Francisco, Cal., for the Indiana Harbor Belt (part of the New York Central System). **Raymond H. Wendt** has been appointed live stock agent for the Indiana

Harbor Belt at Chicago, to succeed **George A. Vinalek**, who has been appointed commercial agent with the same headquarters.

Howard B. Blanchard has been appointed to the newly-created position of Washington (D. C.) representative of the Union Pacific, in which capacity he will handle both freight and passenger matters and other general business for the company. For the past 15 years Mr. Blanchard has been employed in the executive offices of the Union Pacific at Omaha, and since 1925 he has been secretary to Carl R. Gray, who recently retired as president of the railroad.

W. H. Cundey, special passenger representative of the Denver & Rio Grande Western and formerly assistant to the passenger traffic manager of this company, retired on October 1 at the age of 70 years. Mr. Cundey entered the service of D. & R. G. W. 53 years ago and after advancing through various positions in the passenger traffic department he was appointed general passenger agent at Denver in 1925. Two years later he was appointed assistant to the passenger traffic manager and on January 1, 1928, when the latter position was abolished, he was assigned to the position of special passenger representative.

F. L. Gordon, assistant freight traffic manager of the Southern Pacific Lines (in Texas and Louisiana), with headquarters at Houston, Tex., has been promoted to freight traffic manager (in charge of rates and divisions), with the same headquarters, effective October 1, to succeed **S. G. Reed**, who has retired after nearly 50 years of service with this company. **C. H. Owen**, assistant general freight agent at New Orleans, La., has been promoted to assistant freight traffic manager (rates and divisions), with headquarters at Houston, to succeed Mr. Gordon, and **H. S. Roby**, assistant general freight agent at El Paso, Tex., has been transferred to New Orleans to replace Mr. Owen.

Mr. Reed was born on March 24, 1867,



S. G. Reed

in Franklin Parish, La. He attended Colgate University from 1884 to 1886, and entered railway service in 1888 as local freight agent of the Southern Pacific at Victoria, Tex. Since that time his railroad experience, all of which has been with the

Southern Pacific Lines, has included 16 years as chief clerk to the general freight and passenger agent of the New York, Texas & Mexican, one year as division freight and passenger agent of Morgan's Louisiana & Texas, four years as division freight agent of the Houston and Texas Central, seven years as assistant general freight and passenger agent of the Sunset-Central Lines and two years as corporate land and tax agent of the Texas and Louisiana lines. In 1921, Mr. Reed was promoted to assistant to the traffic manager of those lines at Houston, then being further advanced to assistant traffic manager in charge of freight traffic in 1924. In 1929, he was appointed freight traffic manager, which position he held until his retirement.

ENGINEERING AND SIGNALING

A. B. Armistead has been appointed signal inspector of the Norfolk & Western, succeeding **W. D. Felty**, who has been promoted to general signal inspector, with headquarters at Roanoke, Va.

MECHANICAL

J. D. Muir, assistant superintendent motive power of the Canadian Pacific, with headquarters at Winnipeg, Man., has been appointed superintendent motive power and car department, Eastern lines, succeeding **George Whiteley**, deceased.

W. Alexander has been appointed master mechanic of the Portage-Brandon division of the Canadian National, with headquarters at Winnipeg, Man., to succeed **A. Mays**, deceased. **C. D. Smith** has been appointed master mechanic on the Port Arthur division, with headquarters at Sioux Lookout, Ont., to succeed **T. R. Currie**, who has been transferred.

PURCHASES AND STORES

E. G. Roberts has been appointed regional stores accountant of the Western region of the Canadian National, with headquarters at Winnipeg, Man., to succeed **D. J. Leger**, who has retired after 46 years of service with this company.

OBITUARY

E. A. Goeldner, who retired on May 1, 1937, as assistant to the general manager of the Eastern lines of the Atchison, Topeka & Santa Fe, died at his home at Topeka on October 1.

Clare Hartigan, special passenger representative of the New York Central at Chicago, and formerly assistant general passenger agent with the same headquarters, died suddenly on October 7. On August 13, Mr. Hartigan had completed 57 years of service with the New York Central System. Starting with this company in 1880 as an office boy at Oswego, N. Y., he advanced through various positions in the traffic department to that of assistant general passenger agent at Chicago, which position he assumed on June 15, 1912. Since 1932 he had held the position of special passenger representative at the same point.

Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 137 Monthly Reports of Revenues and Expenses Representing 141 Class I Steam Railways
FOR THE MONTH OF AUGUST, 1937 AND 1936

Item	United States		Eastern District		Southern District		Western District	
	1937	1936	1937	1936	1937	1936	1937	1936
Miles of road operated at close of month.....	235,322	236,112	58,158	58,442	44,777	44,880	132,387	132,790
Revenues:								
Freight	\$289,236,645	\$283,487,796	\$116,399,517	\$115,155,657	\$53,137,292	\$54,175,649	\$119,699,836	\$114,156,490
Passenger	41,564,677	39,281,709	22,778,662	21,768,488	4,932,869	4,677,143	13,853,146	12,836,078
Mail	7,677,449	7,554,004	2,903,074	2,913,669	1,316,509	1,302,656	3,457,866	3,337,679
Express	3,495,841	4,385,733	1,427,353	1,734,402	578,322	674,884	1,490,166	1,976,447
All other transportation...	7,837,943	7,382,146	4,014,485	3,854,744	753,606	682,692	3,069,852	2,844,710
Incidental	9,053,906	7,551,626	4,263,891	3,709,050	985,804	867,078	3,804,211	2,975,498
Joint facility—Cr.	1,033,729	1,069,310	311,908	362,440	178,708	221,307	543,113	483,563
Joint facility—Dr.	288,235	251,038	54,239	64,112	23,805	24,658	210,191	162,268
Railway operating revenues	359,611,955	350,461,286	152,044,651	149,434,338	61,859,305	62,576,751	145,707,999	138,450,197
Expenses:								
Maintenance of way and structures	47,702,443	41,903,597	18,763,725	15,598,919	7,530,467	7,017,993	21,408,251	19,286,685
Maintenance of equipment.	70,913,273	64,998,102	30,835,069	28,737,008	13,003,089	12,127,656	27,075,115	24,133,438
Traffic	8,701,081	8,290,437	3,232,071	3,129,536	1,618,990	1,550,750	3,850,020	3,610,151
Transportation	126,685,540	115,536,442	56,383,219	51,721,256	19,761,604	18,445,604	50,540,717	45,369,582
Miscellaneous operations...	3,768,887	3,229,145	1,570,447	1,327,434	337,454	296,785	1,860,986	1,604,926
General	11,094,873	12,875,958	4,412,033	5,631,968	2,118,206	2,197,460	4,564,634	5,046,530
Transportation for investment—Cr.	675,686	634,390	112,749	75,401	95,420	126,255	467,517	432,734
Railway operating expenses	268,190,411	246,199,291	115,083,815	106,070,720	44,274,390	41,509,993	108,832,206	98,618,578
Net revenue from railway operations	91,421,544	104,261,995	36,960,836	43,363,618	17,584,915	21,066,758	36,875,793	39,831,619
Railway tax accruals	*29,643,342	*27,997,732	12,491,726	11,992,339	5,577,726	5,583,213	11,573,890	10,422,180
Railway operating income	61,778,202	76,264,263	24,469,110	31,371,279	12,007,189	15,483,545	25,301,903	29,409,439
Equipment rents—Dr. balance	8,298,488	8,285,007	3,193,943	3,639,367	\$262,491	\$26,166	\$3,667,036	4,671,806
Joint facility rent—Dr. balance	3,171,833	3,342,662	1,756,256	1,741,552	340,304	427,770	1,075,273	1,173,340
Net railway operating income	50,307,881	64,636,594	19,518,911	25,990,360	11,929,376	15,081,941	18,859,594	23,564,293
Ratio of expenses to revenues (per cent)	74.58	70.25	75.69	70.98	71.57	66.33	74.69	71.23
Depreciation included in operating expenses	16,451,080	16,114,627	7,302,094	7,074,203	3,139,463	3,182,612	6,009,523	5,857,812
Total maintenance before depreciation	102,164,636	90,787,072	42,296,700	37,261,724	17,394,093	15,963,037	42,473,843	37,562,311
Net railway operating income before depreciation ..	66,758,961	80,751,221	26,821,005	33,064,563	15,068,839	18,264,553	24,869,117	29,422,105

FOR EIGHT MONTHS ENDED WITH AUGUST, 1937 AND 1936

Item	United States		Eastern District		Southern District		Western District	
	1937	1936	1937	1936	1937	1936	1937	1936
Average number of miles operated	235,586	236,387	58,244	58,531	44,789	44,928	132,553	132,928
Revenues:								
Freight	\$2,286,995,836	\$2,092,385,135	\$977,858,963	\$896,990,286	\$440,416,500	\$412,088,478	\$868,720,373	\$783,306,371
Passenger	293,313,780	270,770,111	161,530,663	152,299,319	41,907,917	36,860,934	91,875,200	81,609,858
Mail	63,340,664	61,026,196	24,180,886	23,442,330	11,144,521	10,891,125	28,015,257	26,692,741
Express	38,440,579	36,513,196	15,549,096	14,336,856	8,228,542	7,815,573	14,662,941	14,360,767
All other transportation...	59,487,638	55,321,261	30,805,157	29,113,943	6,047,241	5,438,607	22,635,240	20,768,711
Incidental	62,063,710	50,808,380	31,364,664	26,754,376	8,378,595	7,134,349	22,320,451	16,919,655
Joint facility—Cr.	8,022,333	7,383,100	2,458,145	2,269,989	1,657,957	1,651,148	3,906,231	3,461,963
Joint facility—Dr.	2,093,802	1,910,411	447,396	419,247	183,981	176,024	1,462,425	1,315,140
Railway operating revenues	2,811,570,738	2,572,296,968	1,243,300,178	1,144,787,852	517,597,292	481,704,190	1,050,673,268	945,804,926
Expenses:								
Maintenance of way and structures	337,461,820	300,893,247	132,344,134	115,342,846	58,371,148	53,731,923	146,746,538	131,818,478
Maintenance of equipment.	562,260,297	510,972,801	255,717,769	230,227,134	100,666,476	93,440,440	205,876,052	187,305,227
Traffic	69,912,869	66,194,546	25,740,777	24,537,456	13,194,611	12,783,686	30,977,481	28,873,404
Transportation	998,996,485	912,523,518	450,715,024	418,878,558	163,031,514	150,618,323	385,249,947	343,026,637
Miscellaneous operations...	27,241,882	23,183,623	12,028,902	10,424,902	3,461,595	2,850,067	11,751,385	9,908,654
General	100,818,817	104,439,956	42,776,309	45,940,376	18,103,254	17,735,510	39,939,254	40,764,070
Transportation for investment—Cr.	3,346,336	2,975,637	499,882	309,872	488,339	464,804	2,358,115	2,200,961
Railway operating expenses	2,093,345,834	1,915,232,054	918,823,033	845,041,400	356,340,259	330,695,145	818,182,542	739,495,509
Net revenue from railway operations	718,224,904	657,064,914	324,477,145	299,746,452	161,257,033	151,009,045	232,490,726	206,309,417
Railway tax accruals	*222,573,518	*204,807,554	102,261,850	86,293,946	47,883,520	41,917,042	72,428,148	76,596,566
Railway operating income	495,651,386	452,257,360	222,215,295	213,452,506	113,373,513	109,092,003	160,062,578	129,712,851
Equipment rents—Dr. balance	63,144,910	61,889,602	26,709,362	28,687,011	3,505,333	3,079,060	32,930,215	30,123,531
Joint facility rent—Dr. balance	24,289,249	25,981,189	13,530,504	14,155,653	2,575,766	3,199,157	8,182,979	8,626,379
Net railway operating income	408,217,227	364,386,569	181,975,429	170,609,842	107,292,414	102,813,786	118,949,384	90,962,941
Ratio of expenses to revenues (per cent)	74.45	74.46	73.92	73.82	68.85	68.65	77.87	78.19
Depreciation included in operating expenses	130,317,232	129,041,511	57,775,323	56,212,958	25,008,194	25,507,131	47,533,715	47,321,422
Total maintenance before depreciation	769,404,885	682,824,537	330,286,580	289,357,022	134,029,430	121,665,232	305,088,875	271,802,283
Net railway operating income before depreciation ..	538,534,459	493,428,080	239,750,752	226,822,800	132,300,608	128,320,917	166,483,099	138,284,363

* Includes charges under the requirements of the Social Security Act of 1935 in the total amount of \$3,480,268; also includes charges and credits resulting in a net charge of \$2,640,262, because of provisions of the "Carriers Taxing Act of 1937," approved June 29, 1937, and repeal of the Act of August 29, 1935, levying an excise tax upon carriers and an income tax upon their employees, and for other purposes. (Public No. 400, 74th Congress.) The charges and credits were not handled in a uniform manner by all the carriers and separate totals are not available.

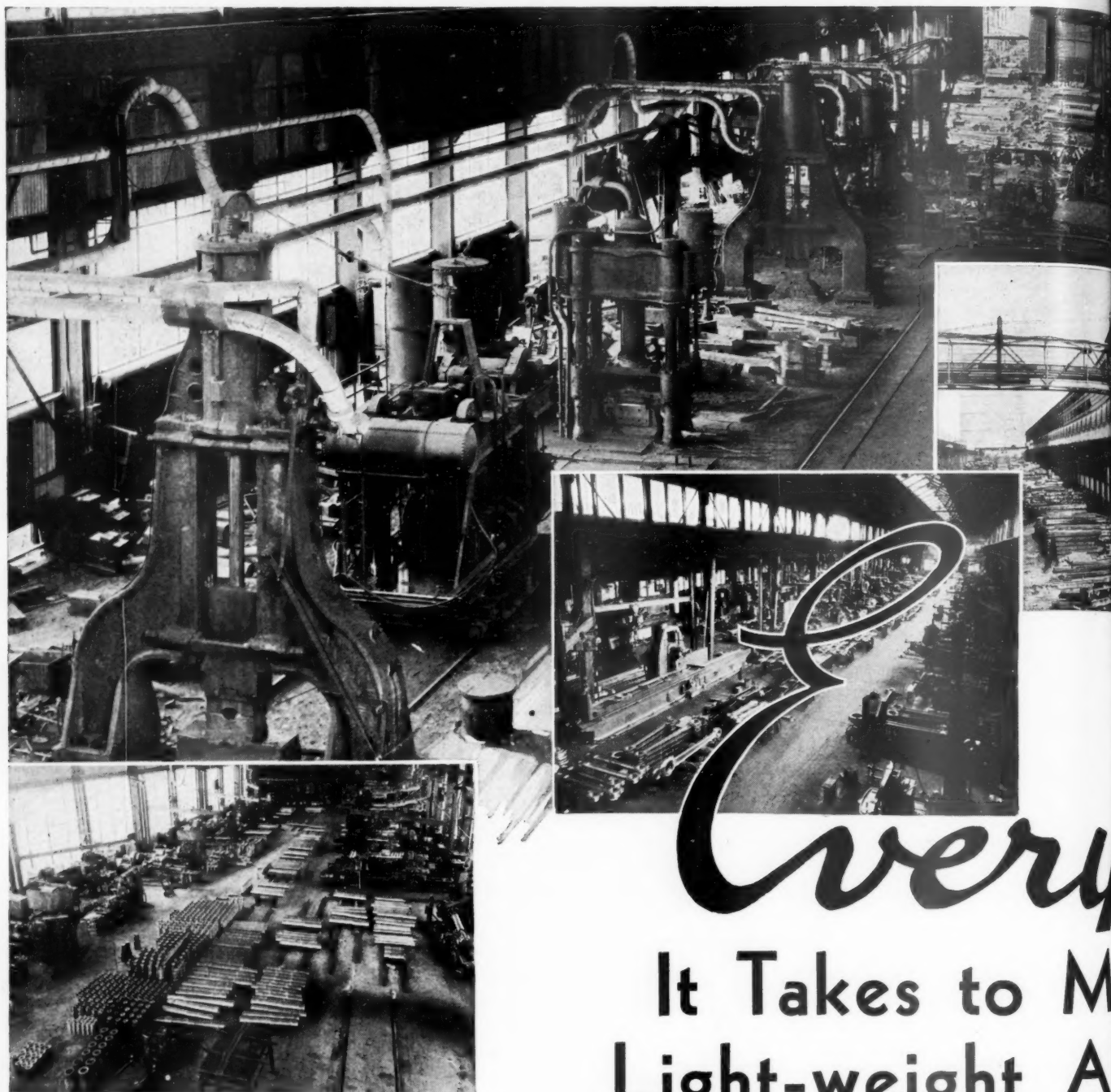
† Includes charges in the total amount of \$5,325,855 itemized as follows: \$1,519,201 for taxes under the requirements of the Social Security Act of 1935, and \$3,806,654 under the requirements of an Act approved August 29, 1935, levying an excise tax upon carriers and an income tax upon their employees, and for other purposes. (Public No. 400, 74th Congress.)

‡ Includes charges under the requirements of the Social Security Act of 1935 in the total amount of \$26,212,720; also includes charges and credits resulting in a net charge of \$13,050,822, because of provisions of the "Carriers Taxing Act of 1937," approved June 29, 1937, and repeal of the Act of August 29, 1935, levying an excise tax upon carriers and an income tax upon their employees, and for other purposes. (Public No. 400, 74th Congress.) The charges and credits were not handled in a uniform manner by all the carriers and separate totals are not available.

§ Includes charges in the total amount of \$35,018,148 itemized as follows: \$11,662,436 for taxes under the requirements of the Social Security Act of 1935, and \$23,355,712 under the requirements of an Act approved August 29, 1935, levying an excise tax upon carriers and an income tax upon their employees, and for other purposes. (Public No. 400, 74th Congress.)

§ Deficit or other reverse items.

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.



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WITH the advent of higher speeds demanding lighter reciprocating parts, Alco was cognizant of the fact that the facilities heretofore used were entirely inadequate.

Realizing that an entirely different manufacturing set-up including equipment and personnel was imperative, Alco remodeled its entire forging department. Expensive appliances adapted to the working of alloy steel were placed in service—up-to-date forging machinery—scientific testing apparatus—special preheating and heat-treating furnaces—modern temperature control devices—special finishing machinery and many other costly items.

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